



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5
25063 CENTER RIDGE ROAD
WESTLAKE, OH 44145-4114

October 31, 2016

MEMORANDUM

SUBJECT: CAFO Inspection,
FOIA Ex. 6
(Personal) Farms, Henry County, Ohio

FROM: Anne Marie Vincent, Life Scientist

THRU: Mark E. Conti, Lead Environmental Engineer
Region 5 OECA (ME-W)

TO: Barbara Van Til, Chief, Immediate Office of
Water Enforcement & Compliance Assurance, (WC-15J)

On August 16 and 17, 2016, Paul Novak Jr. and I conducted a Concentrated Animal Feeding Operation inspection at FOIA Ex. 6
(Personal) Farms located in New Bavaria, Ohio, in response to a Water Division request. Sampling was also conducted. The inspection also included a satellite facility owned by FOIA Ex. 6
(Personal) Farms which shares land application acreage with the main facility. The inspection findings are attached.

Attachments (6)

pc: Brooke Furio, ME-W w/o attachment


Concentrated Animal Feeding Operation Inspection Report

FOIA Ex. 6
(Personal)

Farms, Dairy and Satellite Facilities
New Bavaria, Ohio

Inspected August 16 and 17, 2016

Prepared by:


Anne Marie Vincent, Life Scientist

11-1-16
Date

Approved by:


Brooke Furio, Section Chief, Cleveland Section

11-3-16
Date

U.S. Environmental Protection Agency
Region 5
Office of Enforcement & Compliance Assurance, Cleveland Office
25063 Center Ridge Road, Westlake, OH 44145

I. PERMITEE IDENTIFICATION**A. Main Facility Name and Address**

FOIA Ex. 6
(Personal)
Farms (Main Facility)
FOIA Ex. 6 (Personal Privacy)

New Bavaria, Ohio 43548

Satellite Facility (Shared Land Application Acreage)
Ex. 6 (Personal Privacy)**Office Mailing Address**

Ex. 6 (Personal Privacy)

B. Responsible Officials

Ex. 6. (Personal Privacy)

C. Individual CAFO NPDES Permit

This facility is not operating under an NPDES permit.

D. Receiving Waters

An unnamed intermittent tributary waterway on the west side of Township Road 12 receives a tile discharge of contaminated storm water run-off from the production area of the FOIA Ex. 6 (Personal) Farms dairy facility ½ mile away. This unnamed tributary is referred to as West Creek Ditch by Ex. 6. (Personal Privacy). This unnamed intermittent tributary runs north approximately 1 mile and flows into Mess Ditch.

There is also an unnamed intermittent tributary approximately ½ mile east/northeast of the satellite facility for FOIA Ex. 6 (Personal) Farms, which receives a tile discharge of contaminated storm water from the production area of the satellite facility. This second unnamed intermittent tributary east of the satellite facility runs northwest approximately 1 mile to its confluence with the unnamed intermittent tributary (West Creek Ditch) that receives the contaminated storm water tile flow from the main facility. The discharge from the main facility into the unnamed intermittent tributary waterway (West Creek Ditch) is approximately ½ mile north of the confluence of the two unnamed intermittent tributaries.

Mess Ditch flows approximately 1 ½ mile northeast and east and joins Gustwiller Ditch to form the beginning of West Creek. West Creek flows northeast approximately 6 miles to its confluence with South Turkeyfoot Creek. South Turkeyfoot Creek flows approximately 18 miles north and northeast before flowing into the Maumee River. The Maumee River then flows east/northeast approximately 39 miles before flowing into the western basin of Lake Erie.

II. DATES OF INSPECTION

August 16 and 17, 2016

III. PARTICIPANTS

A. Owners /Operators

Ex. 6. (Personal Privacy)

B. Ohio Department of Agriculture
Dan Bruner, Livestock Environmental Inspector
Division of Livestock Environmental Permitting
Telephone: (614) 387-0470

C. U.S. EPA
Anne Marie Vincent, Life Scientist
Telephone: (440) 250-1720

Paul Novak Jr., Geologist
Telephone: (440) 250-1714

IV. INTRODUCTION

On August 16, 2016, Anne Marie Vincent and Paul Novak conducted a Concentrated Animal Feeding Operation inspection at the FOIA Ex. 6 (Personal) Farms facility in New Bavaria, Henry County, Ohio (Attachment 1). The facility was selected for inspection by USEPA Region 5 Water Division. Upon arrival at 8:30 a.m., Paul Novak and I presented our credentials to Ex. 6. (Personal Privacy) (Owner/Operator) of FOIA Ex. 6 (Personal) Farms. I explained the purpose of the inspection and that the inspection would include an opening discussion and interview with questions relative to the farm and its operation; a review of available records for the dairy operations; a site walk-through of the production area; photographs taken while conducting the walk-through (Attachment 2); and a close-out meeting. Ex. 6. (Personal Privacy)

Ex. 6. (Personal Privacy) were also present for the inspection. Ex. 6. (Personal Privacy) stated that both Ex. 6. (Personal Privacy) are co-owners and co-operators with him for FOIA Ex. 6 (Personal) Farms. They are the three main employees of the dairy and satellite facilities. Factual information gathered from the inspection was provided by Ex. 6. (Personal Privacy) unless otherwise noted. Region 5 biosecurity procedures including a pre-inspection and post-inspection car wash for the government vehicle and inspectors donning disposable over-boots during the site walk-throughs were followed, as FOIA Ex. 6 (Personal) Farms' bio-security protocol was less stringent than U.S. EPA's bio-security protocol. Ex. 6. (Personal Privacy) was informed of his right to make a Confidential Business Information (CBI) claim at any time during the inspection. Ex. 6. (Personal Privacy) did not make any CBI claims during the inspection. Dan Bruner, Livestock Environmental Inspector, for Ohio Department of Agriculture was also present for the inspection. The weather conditions at the time of the inspection were warm in the mid-70s to low 80s and cloudy with intermittent periods of light to

moderate rain showers. Paul Novak and I completed the inspection of the dairy and I summarized the findings of concern and observations with **Ex. 6. (Personal Privacy)** during the inspection close-out meeting. The findings of concern and observations are further discussed in the *Findings and Observations* section of this report. **Ex. 6. (Personal Privacy)** was also provided with a compact disc of copies of the 22 photographs taken during the inspection, a copy of the chain of custody form for the split sample S01, and a copy of the Receipt for Samples and Documents for the photographs.

On August 17, 2016, Paul Novak and I returned to **FOIA Ex. 6 (Personal)** Farms to take pictures of the concrete manure storage vault at the dairy and conduct a site walk-through of the production area at the **Ex. 6. (Personal Privacy)** Farms satellite facility for heifers and steers with **Ex. 6. (Personal Privacy)**. I conducted a separate close-out meeting for this visit and discussed my findings of concern and observations for the satellite facility with **Ex. 6. (Personal Privacy)** before leaving the site. Those findings of concern and observations are further discussed in the *Findings and Observations* section of this report. Wiley **FOIA Ex. 6 (Personal)** was also provided with a compact disc of copies of the 7 photographs taken during the return visit and a copy of the Receipt for Samples and Documents for the additional photographs.

V. PURPOSE

The purpose of the inspection was to determine whether the **FOIA Ex. 6 (Personal)** Farms facility at 11-952 County Road Y had pathways by which process wastewater pollutants could potentially discharge or were discharging from the production area to ponds, ditches and tiles, which subsequently discharge to waters of the United States. The **FOIA Ex. 6 (Personal)** Farms facility was one of several facilities chosen for inspection in FY 2016 by USEPA Region 5 Water Division.

VI. BACKGROUND

According to **Ex. 6. (Personal Privacy)** **FOIA Ex. 6 (Personal)** Farms previously operated both a dairy and a swine operation on site. The feral to finish swine operation on site was shut down in 2008.

VII. SUMMARY OF FINDINGS

GENERAL FACILITY INFORMATION AND CAFO STATUS

According to **Ex. 6. (Personal Privacy)** the size of the production area for the main facility is approximately 4 acres, with 2 of those acres devoted to fenced pasture area. **FOIA Ex. 6 (Personal)** Farms owns a satellite facility located on Township Road 12 (Attachment 2, Photograph 34). The production area at the satellite facility is less than an acre in size. The main facility and this satellite facility share land application sites, according to **Ex. 6. (Personal Privacy)**. No crops or forage growth are sustained over any portion of the production areas at either location where the animals are kept. There are four fenced dirt/grass open lot areas on the north end of the production area where weaned calves, milking cows and heifers can be sent out to pasture at the main dairy facility for portions of the day. At the time of inspection, **Ex. 6. (Personal Privacy)** stated that there were approximately 45 milking cows, 11 dry cows and heifers, approximately 12 to 15 calves and 5 beef cattle at the main facility. This satellite facility currently holds approximately 10 heifers and 14 steers. The satellite facility does not have dairy operations associated with it, other than to house the heifers and steers. The maximum number of animals kept at

the main facility since the start of operations has been close to its current operating numbers according to Ex. 6. (Personal Privacy) with a maximum number of 50 milking cows. The satellite facility's maximum capacity, according to Ex. 6. (Personal Privacy) is 30 heifers and 30 steers. Considering the maximum capacities at both facilities as identified by Ex. 6. (Personal Privacy) FOIA Ex. 6 (Personal) Farms is operating within the regulatory size designation thresholds for dairy cows (less than 200 animals) and cattle (heifers, steers, bulls and cow/calf pairs less than 300 animal/animal pairs) as a "Small" facility.

At the dairy facility, cows are milked twice a day. Calves are housed in individual pens inside the Calf Barn (0-3 months old). Older calves (3 to 4 months old) are housed in the Weaned Calf Barn. These older calves have access to a small fenced concrete corral adjacent to the north end of the Weaned Calf Barn. Animals in the free stall barn and the larger Dry Cow/Heifer Barn also have open access to a large fenced concrete corral area on the east sides of these barns. Beef cattle are kept in a small barn adjacent to the south end of the equipment/hay storage barn. The smaller beef cattle barn has an open dirt lot area that beef cattle can access. There are also four fenced dirt/grass open lot areas on the north end of the production area where animals can be sent out to pasture. One pasture area is for heifers, two pasture areas are used for milking cows and one pasture area is for weaned calves. At the satellite facility, the heifers and steers also have open access to a fenced concrete lot area between the south animal barn and the north animal barn. This concrete lot is divided in half to separate heifers from the steers. Ex. 6. (Personal Privacy) stated that the animals at the dairy and the satellite location are in either the open concrete lot areas and/or the pasture areas for approximately 18 hours per day. According to Ex. 6. (Personal Privacy) there are three employees that operate the dairy and satellite facilities and all three are immediate family members Ex. 6. (Personal Privacy)

Ex. 6. (Personal Privacy)

WATERWAYS and RECEIVING WATERS

Animals do not have direct access to waters of the U.S. and/or its tributaries at the FOIA Ex. 6 (Personal) Farms main facility or the satellite facility. There are no storm water pathways entering the production areas at either location and there are no clean water/clean storm water ponds at the main facility location or the satellite location.

A drainage tile from the contaminated storm water reception basin at the east end of the drainage trench in the production area of the FOIA Ex. 6 (Personal) Farms dairy runs north and then west across the FOIA Ex. 6 (Personal) property (approximately ½ mile) and discharges into the unnamed intermittent tributary on the west side of Township Road 12. This unnamed tributary is referred to as West Creek Ditch by Ex. 6. (Personal Privacy) This unnamed intermittent tributary runs north approximately 1 mile and flows into Mess Ditch.

The satellite facility for FOIA Ex. 6 (Personal) Farms also has a drainage tile from its contaminated storm water reception basin that runs east/northeast approximately ½ mile and discharges into another unnamed intermittent tributary. This second unnamed intermittent tributary east of the satellite facility runs northwest approximately 1 mile to its confluence with the unnamed intermittent tributary (West Creek Ditch) that receives the contaminated storm water tile flow from the main facility. The discharge from the main facility into this unnamed tributary (West Creek Ditch) is approximately ½ mile north of the confluence of the two unnamed intermittent tributaries.

Mess Ditch flows approximately 1 ½ mile northeast and east and joins Gustwiller Ditch to form the beginning of West Creek. West Creek flows northeast approximately 6 miles to its confluence with South Turkeyfoot Creek. South Turkeyfoot Creek flows approximately 18 miles north and northeast before flowing into the Maumee River. The Maumee River then flows east/northeast approximately 39 miles before flowing into the western basin of Lake Erie.

The unnamed intermittent tributaries and Mess Ditch are within the headwaters of West Creek. For West Creek, Middle South Turkeyfoot Creek and Lower South Turkeyfoot Creek, the beneficial uses for human health and recreation are listed as "Use Attainment Unknown" in the Ohio 2014 Integrated Water Quality Monitoring and Assessment Report Section L4. Section 303(d) List of Prioritized Impaired Waters. The beneficial use for aquatic life for all three waterways is listed as "Impaired; TMDL needed" based on historical data and it is retained from the 2008 Integrated Report. These waterways are not utilized for public drinking water supplies according to the 2014 report. The West Creek basin and the Middle South Turkeyfoot Creek basin are identified by Ohio EPA as having approximately 90% agricultural row crop coverage.

For the Maumee River Mainstem, from its confluence with the Tiffin River all the way to Maumee Bay, the beneficial uses of human health, recreation, aquatic life and public drinking water supplies are listed as "Impaired; TMDL needed."

It can be noted that in the Draft Ohio 2016 Integrated Water Quality Monitoring and Assessment Report, Section L4. Section 303(d) List of Prioritized Impaired Waters, the beneficial use for recreation has been changed to "Impaired; TMDL needed" for West Creek, Middle South Turkeyfoot Creek and Lower South Turkeyfoot Creek. The draft report is currently out for review and comments. The Draft Ohio 2016 Integrated Water Quality Monitoring and Assessment Report, Section L4. Section 303(d) List of Prioritized Impaired Waters now also lists "Lake Erie Western Basin Shoreline (including Maumee Bay and Sandusky Bay)" as a prioritized impaired water with all beneficial uses (human health, recreation, aquatic life, and public drinking water supplies) listed as "Impaired; TMDL needed."

WASTE HANDLING, TREATMENT, AND/OR MANAGEMENT OPERATIONS

During the inspection, Ex. 6. (Personal Privacy) led the walk-through of the production area at the dairy. During the walk-through, Ex. 6. (Personal Privacy) provided the information and answers to questions raised by Paul Novak and myself. That information, along with the answers to questions from the checklist review during the initial interview is provided in this report. Ex. 6. (Personal Privacy) also participated in the production area walk-through.

Drinking Water/Cooling Systems

At the main dairy facility, according to Ex. 6. (Personal Privacy), drinking water for the animals is provided through overflow waterers. Ex. 6. (Personal Privacy) indicated that they do not have plate-cooler water or non-contact cooling water. Well water is used for the overflow waterers. According to Ex. 6. (Personal Privacy), any overspill from the waterers would either be absorbed by solid manure pack (sand or straw bedding) or would run off to the constructed drainage trench that directs flow to the reception basin east of the manure slurry aboveground storage tank (manure slurry AST). The facility does not use a mist cooling system.

At the satellite heifer and steer facility drinking water for the animals is provided through overflow waterers. Well water is used for the overflow waterers. According to Ex. 6. (Personal Privacy) any overspill from the waterers would either be absorbed by solid manure pack or would follow the gradient of the open concrete corral and flow to the reception basin at the southeast corner of the corral. The reception basin has an outlet tile that directs liquids out to an unnamed intermittent tributary waterway. There are no milking operations at this satellite facility and there is no mist cooling system.

Manure Process Waste Water and Bedding Management

There are several buildings used to confine animals at the dairy which include the Calf Barn, Weaned Calf Barn, Calving Barn, Freestall Barn, Dry Cow/Heifer Barn, and the Beef Cattle Barn. At the satellite facility, there are two barns (East Barn and West Barn) which house steers and heifers. Ex. 6. (Personal Privacy) Farms does not use traditional calf hutches at either location. Ex. 6. (Personal Privacy) stated that the animals at the dairy and the satellite location are either in the open corral areas and/or the pasture areas for approximately 18 hours per day.

According to Ex. 6. (Personal Privacy) the milking parlor floor is scraped clean of manure with the skid steer. Dairy personnel do not flush the milking parlor floor with any wash water, as there are no floor drains in the milking parlor (Attachment 2, Photograph 3). Scraped manure is removed by the skid steer and dumped into the underground concrete manure storage vault (Attachment 2, Photograph 14). Milk tanks in the Tank Room are rinsed with well water. This rinse water is emptied onto the Tank Room floor and flows into the floor drains (Attachment 2, Photograph 1). These floor drains are plumbed to a catch basin located north of the Tank Room (Attachment 2, Photograph 2). An underground plastic pipe directs flow from this catch basin to the reception basin at the end of the constructed drainage trench where it discharges into the reception basin (Attachment 2, Photograph 22). This reception basin is constructed with a drain tile that directs flow to the northeast, eventually discharging into an unnamed tributary to Mess Ditch. The dairy does not use foot baths for the animals; therefore, copper sulfate or formaldehyde are not used on site. Teat Dip containers are used in the parlor area. Waste barrels for the teat dip solution are located within the parlor area.

Straw is used as bedding material in the Calf Barn (Attachment 2, Photograph 18), Weaned Calf Barn (Attachment 2, Photograph 15), the Calving Barn and the Beef Cattle Barn. Straw bedding is removed once every 3 to 4 months with a skid steer. The removed straw bedding is directly land applied if possible or stored on the bare ground in the Solids Storage Area near the northeast outside corner of the Equipment/Hay Storage Barn (Attachment 2, Photographs 11, 19 and 23). Ex. 6. (Personal Privacy) Ex. 6. (Personal Privacy) estimated that the Solids Storage Area has a storage capacity of roughly 3 to 4 months. The Dry Cow/Heifer Barn does not have stalls. The inside of the Dry Cow/Heifer Barn is one large open area for the animals with no bedding used. A manure mat forms on the floor of the Dry Cow/Heifer Barn and this manure mat is removed and land applied as the weather conditions allow. Sand bedding is used in the Freestall Barn (Attachment 2, Photograph 5). A skid steer is used to scrape manure from the lanes between the freestalls twice a day. The stalls are also re-dressed with new sand as necessary. Manure/sand scraped up from these areas with the skid steer is dumped directly into the underground concrete manure storage vault. The concrete corral areas are also manually scraped with a skid steer as needed to remove manure, according to Ex. 6. (Personal Privacy) Manure scraped up from these corral areas is also dumped directly into the concrete manure storage vault (Attachment 2, Photograph 14). Manure is manually pumped out of the north end of the concrete manure storage

vault (Attachment 2, Photograph 13) and into the manure slurry aboveground storage tank (manure slurry AST) by dairy staff as needed (Attachment 2, Photographs 8 and 13).

Ex. 6. (Personal Privacy) did not know the exact volume of the concrete manure storage vault, but provided rough dimension sizes which estimate the volume of the vault to be approximately 27,000 gallons. The manure slurry AST is an open top, glass lined and sealed tank with a concrete bottom that was constructed in 1976 with design assistance from the local Henry County Soil and Water Conservation District, according to Ex. 6. (Personal Privacy). According to Ex. 6. (Personal Privacy) this AST provides approximately 5 to 6 months of manure storage. The initial dimensions provided by Ex. 6. (Personal Privacy) for the tank were 62' diameter and 18' high. Based on these initial dimensions provided by Ex. 6. (Personal Privacy) for the AST, the capacity of this tank is approximately 406,515 gallons ($\pi \times 31^2 \times 18 \times 7.48$ gallons/cubic feet), which is less than Ex. 6. (Personal Privacy) initial volume estimate of 1 million gallons. On October 14, I spoke with Ex. 6. (Personal Privacy) via telephone and requested that he verify the dimensions of the manure slurry AST. On October 17, Ex. 6. (Personal Privacy) informed me via telephone that the AST had a measured diameter of 42 feet and a height of 14 feet. The calculated capacity for the AST based on these measured dimensions equals approximately 145,083 gallons. Based on NRCS Agricultural Waste Management Field Handbook formulas for calculating manure generation, 56 cows (current animal numbers on site: dry and milking) would generate approximately 206,970 gallons of total waste per 6 months (cows and milking parlor waste) not including solid bedding waste and solid manure pack. This estimated calculation for the liquid manure volume generated may be greater than the actual amount of liquid manure generated at FOIA Ex. 6 (Personal) Farms which would need to be collected and managed as liquid manure due to the fact that the milking cows, dry cows and heifers can spend part of the day in pasture; and, the heifers and dry cows also spend part of a day inside the Dry Cow/Heifer Barn. Manure in the pasture areas remains there. In the Dry Cow/Heifer Barn, the manure is allowed to form a manure mat on the floor of the barn and this manure mat is removed and land applied as solid manure when the weather conditions allow. The liquid manure generated in these areas does not end up in the concrete manure storage vault or the manure slurry AST. Therefore, the manure in these animal areas would not contribute to the total liquid manure volume collected on site.

There are no depth gauges on the manure slurry AST or the concrete manure storage vault. Ex. 6. Ex. 6. stated that the dairy staff monitors the production area during the normal course of daily operations. During a follow-up telephone conversation with Ex. 6. (Personal Privacy) on 10/14/2016, he stated that his future plans for the dairy include constructing a manure lagoon for manure liquids and then using the manure slurry AST for solids storage by cutting a doorway in the tank.

At the satellite facility, manure is scraped from the inside of the barns and the corral areas every seven to ten days, according to Ex. 6. (Personal Privacy). The scraped manure is directly land applied when possible. If land application is not possible, the scraped manure is stacked on the concrete pad within the corral until land application is possible.

Contaminated Storm Water Management

There are no contaminated storm water storage ponds at the main dairy facility or at the satellite facility for FOIA Ex. 6 (Personal) Farms. Generally, contaminated storm water run-off in the production area either flows overland into adjacent crop fields and pasture areas or into the constructed drainage trench within the production area (Attachment 2, Photograph 8). The southern edge of the dairy

property is bordered by County Road Y, which sits at a slightly higher elevation than the dairy production area; therefore, storm water run-off cannot flow south out of the production area.

At the main facility, older calves have open access to a small concrete pad corral area adjacent to the Weaned Calf Barn (Attachment 2, Photograph 16). This corral is bordered by a concrete knee wall with fencing attached above the top of the wall. There is an animal gate on the southwest corner of this corral. This is the only area for this corral where contaminated storm water run-off can leave the corral and flow overland into the weaned calf pasture immediately to the west of the corral. There is also a fenced concrete pad area on the east and south sides of the Calf Barn. Storm water run-off from the Calf Barn's fenced area drains over the concrete pad to the southeast, into the corral run-off collection area and then into the constructed drainage trench. Animals housed in the free stall barn and the larger Dry Cow/Heifer Barn also have open access to a large concrete corral area on the east sides of these barns. This large corral area is also bordered by a concrete knee wall with fencing attached above the top of the wall. Storm water run-off in this corral area to the east of these barns follows the gradient of the concrete and flows to the general corral run-off collection area in the far northeast corner of the corral (Attachment 2, Photographs 4, 6 and 7). At this corner, contaminated storm water run-off flows into the constructed drainage trench that runs west to east and flows into a reception basin (Attachment 2, Photographs 8, 9 and 10, 21 and 23). This reception basin is constructed with an outlet pipe that directs flow to the northeast, eventually discharging into an unnamed tributary waterway to Mess Ditch. There are four fenced dirt/grass open lot areas on the north end of the production area where animals are sent out to pasture. One pasture area is for heifers, two pasture areas are used for milking cows and one pasture area is for weaned calves (Attachment 2, Photograph 17). According to Ex. 6. (Personal Privacy) storm water run-off from the southern half of the easternmost pasture area for the milking cows will flow south into the constructed drainage trench for run-off collection. Otherwise the storm water run-off from the remaining milking cow pasture and the heifer pasture areas flows overland to the north to the adjacent crop field. Storm water run-off from the weaned calf pasture area flows north into the western milking cow pasture, according to Ex. 6. (Personal Privacy). There is also a fenced dirt corral on the east side of the Beef Cattle Barn (Attachment 2, Photograph 12) near the southeast corner of the production area. This corral is used for the beef cattle. There was no storm water run-off leaving this dirt corral at the time of the inspection.

Ex. 6. (Personal Privacy) indicated that the farm staff manage the feeding of the animals at the dairy and the satellite facility so as to not generate waste feed. At the dairy facility, if there is waste feed, it is piled in the solids storage area (Attachment 2, Photograph 12) located off of the northeast corner of the equipment/hay barn and south of the constructed drainage trench in the production area. The solids storage area (Attachment 2, Photographs 11, 19 and 23) is a dirt area and any contaminated storm water run-off or leachate drains north into the constructed drainage trench. At the time of the inspection, I did not observe contaminated storm water run-off or leachate from the manure solids or waste feed piles leaving the solids storage area.

A description of the flow of contaminated storm water run-off from silage bags and feed at both facilities is described in *Feed and Silage Storage* section of this report.

At the satellite facility, when land application is not possible, manure solids scraped from inside the barns and the corral areas are stacked on the concrete pad within the corral until land application is

possible. Precipitation falling on the un-roofed divided corral is in contact with manure from the heifers and steers (Attachment 2, Photographs 35 and 36) and with any stacked manure solids piles in the corral which could not be land applied. This contaminated storm water run-off follows the grade of the concrete pad towards drainage holes in the concrete perimeter knee wall in the southeast corner of the corral (Attachment 2, Photographs 36, 37 and 38). Drainage flows through these holes in the concrete knee wall and drains into a reception basin which is covered by a metal grate. According to Ex. 6. (Personal Privacy) a drain tile directs contaminated storm water flow from this reception basin to a nearby ditch. According to topographic maps, an unnamed intermittent tributary waterway is located approximately ½ mile east/northeast from the facility and it flows northwest to another intermittent tributary that then flows into Mess Ditch.

Mortality Management

Routine animal mortalities for both the main dairy facility and the satellite heifer/steer facility are currently picked up by Gerten Dead Stock Services LLC out of Leipsic, Ohio for rendering. The invoices from Gerten Dead Stock Services identify the number of mortalities received for transport and the dates of service. These are the records FOIA Ex. 6 (Personal) Farms keeps for mortality tracking purposes. Prior to having the deadstock rendered, FOIA Ex. 6 (Personal) Farms was composting mortalities on site. The remainder of a previous mortality compost pile is located in the Solids Storage Area (Attachment 2, Photograph 12).

Feed and Silage Storage

At the main dairy location, field grain is stored in three feed storage bins on the east side of the Weaned Calf Barn (Attachment 2, Photograph 15). There are four large silos to the east of the milking parlor and free stall barn (Attachment 2, Photograph 11). One silo holds rye silage. One silo holds hay silage. One silo holds corn silage and one silo is currently not in use. There is one large feed storage bin for soy bean meal near the southwest corner of the milking parlor barn. Hay bales and bag feed are stored inside the equipment/hay storage barn (Attachment 2, Photograph 12). There are also silage bags staged on the ground to the east of the equipment/hay storage barn (Attachment 2, Photographs 11 and 19). The end of the silage bag currently being used is open for quick access to the silage. Ex. 6. (Personal Privacy) stated that he tries to maintain a stone and dirt berm around the end of the bag to contain any rainwater in contact with the open end of the bag. Any contaminated storm water run-off or potential leachate from silage bags would flow north to the drainage trench that runs west to east across the east side of the production area. This drainage trench has a reception basin on its east end, which has a drain tile that directs production area run-off into the unnamed tributary waterway located to the west of the facility. Upon inspection, I did not observe silage leachate outside of the constructed berm in the area around the silage bags. At the satellite facility, hay is stored inside the barns and there are enclosed feed bins for grain storage.

Clean Storm Water Management

There are no constructed clean storm water diversion or collection systems at either the main FOIA Ex. 6 (Personal) Farms dairy facility or the satellite facility.

At the main dairy facility, portions of the roofs on several barns are guttered. At the time of the inspection, downspouts for most gutters discharged roof run-off onto the concrete lot areas within the production area. Storm water run-off, as well as the downspout drainage, flows towards the general corral run-off collection area near the northeastern most corner of the concrete corral on the west side

of the manure slurry AST. The exceptions to this would be that the downspouts for the beef cattle barn and the Equipment/Hay Barn are tied directly into underground drainage tiles. The southern gutter on the Weaned Calf Barn was in disrepair at the time of the inspection; therefore, roof run-off was draining out of the gutter and onto the bare ground on the south side of this calf barn (Attachment 2, Photograph 15). The south gutter for the machine shed appeared to be discharging onto the bare ground within the pasture on the west end of the machine shed. Where there are no gutter systems in place, roof-run-off sheet flows onto the ground beneath the drip lines of the roofs.

The downspouts for the guttered roof run-off from the barns at the satellite facility generally discharge onto the ground outside of the production area. Exceptions to this are the downspout on the southeast corner of the west barn and the downspout on the southwest corner of the east barn. The downspout on the southeast corner of the west barn discharges onto the concrete lot in between the east and west barns. This flow would follow the gradient of the concrete to the southeast into the reception basin for run-off that directs flows via drain tile out to an unnamed tributary. The downspout on the southwest corner of the east barn discharges onto the ground within 3 feet of the reception basin for run-off which was described above.

Comprehensive Nutrient Management Plan and Land Application

FOIA Ex. 6
(Personal) Farms does not have a manure management plan or Comprehensive Nutrient Management Plan (CNMP). They are not keeping land application records. FOIA Ex. 6
(Personal) Farms owns 200 acres which are available for land application activities. Ex. 6. (Personal Privacy) stated that he does not apply to frozen or snow covered ground. Ex. 6. (Personal Privacy) stated that he typically applies 3,000 gallons of manure per acre to his land application fields. There are flow meters on the application equipment.

Since the swine farming operation on site ended in 2008, Ex. 6. (Personal Privacy) has not been sampling the manure solids or liquids. Prior to the U.S. EPA inspection, the manure slurry AST was most recently pumped down for land application activities in April 2016, according to Ex. 6. (Personal Privacy) Ex. 6. (Personal Privacy)

Ex. 6. (Personal Privacy) estimates that the volume removed from the manure slurry AST was approximately one-third to one-half of the full volume of the tank. Based upon the measured dimensions of the AST provided by Ex. 6. (Personal Privacy) that land applied volume would be between approximately 45,000 gallons and 72,500 gallons. In addition, Ex. 6. (Personal Privacy) estimates that approximately 300 tons of solid manure (approximately 50 loads: 6 to 7 tons per load) were land-applied in April 2016 as well. Ex. 6. Ex. 6. stated that he estimates the annual liquid manure generated is approximately 1.5 times Ex. 6. volume of the manure slurry AST which would be approximately 217,000 gallons and the annual solids generated is approximately 600 tons. FOIA Ex. 6
(Personal) Farms does not keep records of manure storage volumes or records of the volume of liquid manure or solid manure that is land applied. So the volumes provided by Ex. 6. (Personal Privacy) were estimated.

Ex. 6. (Personal Privacy) also stated that they do not transfer manure off-site from either facility location to other parties. There were no Distribution and Utilization forms to review. According to Ex. 6. (Personal Privacy) facility personnel perform routine visual inspections of the production area during the normal course of daily operations. Though these visual observation inspections are completed, there is no written record of them. If issues are identified, Ex. 6. (Personal Privacy) stated that a note is made regarding what needs to be addressed. Once the repair or issue is addressed, the note is thrown away. The farm personnel are not keeping any records on the daily or weekly depths of the manure slurry AST or the depth of manure in the concrete manure storage vault.

The results are summarized below in Table 1.

Table 1 Sample Analysis Results Summary

Sample	Analysis Parameters							
	BOD (mg/L)	TSS (mg/L)	TDS (mg/L)	Ammonia as N (mg/L)	TKN (mg/L)	NO ₂ - NO ₃ (mg/L)	Total P (mg/L)	Fecal Coliform (per 100 mL)
S01	240 L	262	1360	18.1 *	68.5 L *	0.34	16.4 K *	> 200,000
B02	U/ UJ	U	U	U	0.32 J	U	U	Not Analyzed

Key:

mg/L = Milligram per Liter

* = Dilution factor of 20

J = The identification of the analyte is acceptable; the reported value is an estimate

K = The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.

L = The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.

U = Not Detected

UJ = The analyte was not detected at or above the reported limit. The reported limit is an estimate.

Refer to the Analysis Case Narratives from CRL in Attachment 6 for further descriptions on the data qualifiers on the sample results for BOD, TKN and Total P analyses.

FINDINGS AND OBSERVATIONS

During the inspection on August 16, 2016, there were intermittent periods of light to moderate rainfall. According to www.weather.com, the New Bavaria area received a daily total rainfall of 0.21 inches on August 16, 2016 and 0.19 inches on the previous day of August 15. The temperature was in the mid-70s to low 80s.

The reception basin at the dairy receives manure contaminated storm water run-off from the outdoor corral areas via the constructed drainage trench, and it also receives milk tank rinse water from the Tank Room floor drains. This reception basin is constructed with an outlet pipe that allows for a direct discharge of contaminated storm water run-off and wastewater into a nearby intermittent waterway, according to [Ex. 6. \(Personal Privacy\)](#) description of the reception basin during the inspection. The unnamed intermittent waterway which receives the discharge is a tributary waterway to Mess Ditch (an intermittent tributary waterway to West Creek).

The satellite facility for [FOIA Ex. 6 \(Personal\)](#) Farms has a similarly constructed reception basin like the one at the dairy. The reception basin at the satellite facility receives manure contaminated storm water run-off from the outdoor corral area. Run-off flows over the concrete pad of the corral towards two holes in the concrete perimeter knee wall, which allow the flow to drain into the adjacent grated opening for the reception basin. This reception basin is constructed with an outlet pipe that allows for a direct discharge of contaminated storm water run-off into a nearby intermittent waterway, according to [Ex. 6. \(Personal Privacy\)](#) description of the reception basin during the inspection on August 17, 2016. This unnamed intermittent waterway which receives the satellite facility discharge is tributary to the unnamed intermittent

DISCHARGE INFORMATION

According to [Ex. 6. (Personal Privacy)] within the last twelve months from the date of the inspection, there had been no documented discharges of livestock wastes to surface water from the dairy facility, the satellite facility or from land applications of manure from either facility. During the August 16, 2016 inspection, the drainage trench in the production area was discharging contaminated storm water run-off from the production area into a steel reception basin. This basin is constructed with an outlet tile pipe that directs flow from the basin out to an unnamed intermittent tributary to Mess Ditch. The outlet pipe discharge into the unnamed tributary was not observable due to its location on a property (crop field) not owned by [FOIA Ex. 6 (Personal)] Farms.

On August 17, 2016, we re-visited [FOIA Ex. 6 (Personal)] Farms for the purpose of observing the satellite facility. The satellite facility is also designed so that any contaminated storm water run-off in the fenced corral area would follow the grade of the concrete corral pad to drain into a concrete reception basin. This reception basin is also designed with an outlet tile, according to [Ex. 6. (Personal Privacy)] that discharges into a ditch nearby. Based on topographic maps, there is an unnamed intermittent tributary headwater ½ mile east/northeast of the satellite facility that flows into another unnamed intermittent tributary to Mess Ditch which is an intermittent tributary stream to West Creek. The reception basin was not receiving flow, and there was no discharge occurring during our walk-through of the satellite facility.

SAMPLING

At the time of the inspection, I observed contaminated storm water run-off from the concrete corral areas on the east side of the animal barns at the dairy flowing into the drainage trench within the production area. The run-off was flowing through the drainage trench and into a steel reception basin. According to [Ex. 6. (Personal Privacy)] that basin is constructed with an outlet pipe that directs flow to the northeast, eventually discharging into an unnamed intermittent tributary to Mess Ditch. During the inspection there were periods of light, steady rainfall. According to www.weather.com, the New Bavaria area received a daily total rainfall of 0.21 inches on August 16, 2016 and 0.19 inches on the previous day of August 15. Paul Novak and I collected 1 sample set "S01" from the drainage trench flow as it entered the steel reception basin (Attachment 2, Photograph 20). We provided a split sample of S01 (with a signed chain of custody) to [Ex. 6. (Personal Privacy)] along with a printed summary of the analyses to be performed on the samples we were sending to the laboratories. The sample was collected under the *General Field Sampling Plan for AFO Inspections FY 2016* for the OECA Cleveland Office.

Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), Total Dissolved Solids (TDS), Total Phosphorus (Total P), Ammonia as Nitrogen (Ammonia as N), Nitrate-Nitrite Nitrogen (NO₂-NO₃), and Total Kjeldahl Nitrogen (TKN) analyses were performed by U.S. EPA Region 5 Chicago Regional Laboratory (CRL). In addition to S01, we collected a blank sample (B02). S01 and B02 were stored on ice after collection and the sample bottles for TKN, NO₂-NO₃, Total P and Ammonia as N were dosed with 2 milliliters of concentrated H₂SO₄ preservative. These samples were shipped on ice via UPS Next Day Air (Attachment 2, Photographs 75 and 76) on the afternoon of August 16, 2016 and delivered to the U.S. EPA Region 5 Chicago Regional Laboratory (CRL) on August 17, 2016 for analysis. The sample for Fecal Coliform analysis was stored on ice after collection and transported directly to Alloway Laboratories in Lima, Ohio on August 16, 2016 within four hours of the sample collection time. The table below summarizes the laboratory results for samples S01 and B02 (blank sample). Sample analysis reports from Alloway and CRL are provided in Attachment 6.

waterway that receives the discharge from the reception basin at the dairy.

The calculated capacity for the manure slurry AST at the dairy, based on the measured dimensions provided by Ex. 6. (Personal Privacy) after the inspection, equals approximately 145,083 gallons. The capacity of the concrete manure storage vault is approximately 27,000 gallons. Therefore, the total manure storage capacity on site is approximately 172,000 gallons. Based on NRCS Agricultural Waste Management Field Handbook formulas for calculating manure generation, 56 cows (current animal numbers on site: dry and milking) would generate approximately 206,970 gallons of total waste for 6 months (cows and milking parlor waste) not including solid bedding waste and solid manure pack. The total storage capacity on site for liquid manure (172,000 gallons) is smaller than the calculated manure volume generated for 6 months by 56 cows. Proper and timely management of the manure levels in the manure slurry AST and the concrete manure storage vault is critical due to the limited liquid manure storage capacity on site. This estimated calculation for the liquid manure volume generated may be greater than the amount of liquid manure generated at FOIA Ex. 6 (Personal) Farms which would need to be collected and managed due to the fact that the milking cows, dry cows and heifers can spend part of the day in pasture; and, the heifers and dry cows also spend part of a day inside the Dry Cow/Heifer Barn. Manure in the pasture areas remains there. In the Dry Cow/Heifer Barn, the manure is allowed to form a manure mat on the floor of the barn and this manure mat is removed and land applied as solid manure when the weather conditions allow. The liquid manure generated in these areas does not end up in the concrete manure storage vault or the manure slurry AST. Therefore, the manure in these animal areas would not contribute to the total liquid manure volume collected on site. Based on these variables, more information is needed to determine if adequate manure storage is available on site.

U.S. EPA Forms:

EPA Form 3560-3 and The Inspection Conclusion Data Sheet were electronically submitted online to James Coleman, USEPA, Region 5.

LIST OF ATTACHMENTS

<u>Attachment</u>	<u>Description</u>
1	Site Location Map
2	Inspection Photograph Log
3	Annotated Aerial Map Overview
4	Annotated Aerial of Dairy
5	Annotated Aerial of Satellite Facility
6	Sampling Data Packages and Chain of Custody Forms

ATTACHMENT 1
Site Location Map



U.S. DEPARTMENT OF THE INTERIOR
U. S. GEOLOGICAL SURVEY

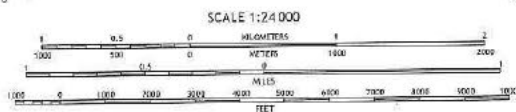
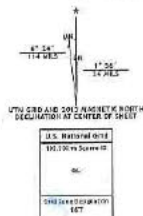


HAMLER QUADRANGLE
OHIO
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84) Projection and
1 000-meter grid Universal Transverse Mercator, Zone 18T
19 830-foot USGS Ohio Coordinate System of 1982 (north arrow)
This map is not a legal document. Information may be
generalized for this map scale. Private lands within government
jurisdiction may not be shown. Obtain permission before
entering private lands.

Revised: August 2013
Data: 2013
Hydrography: 2013
Contours: 2013
Boundaries: 2013
Public Land Survey System: 2013



CONTOUR INTERVAL 5 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988
This map was produced to conform with the
National Geospatial Program US Topo Product Standard, 2011.
A metadata file associated with this product is draft version 4.6.15



NEARBY LOCATIONS

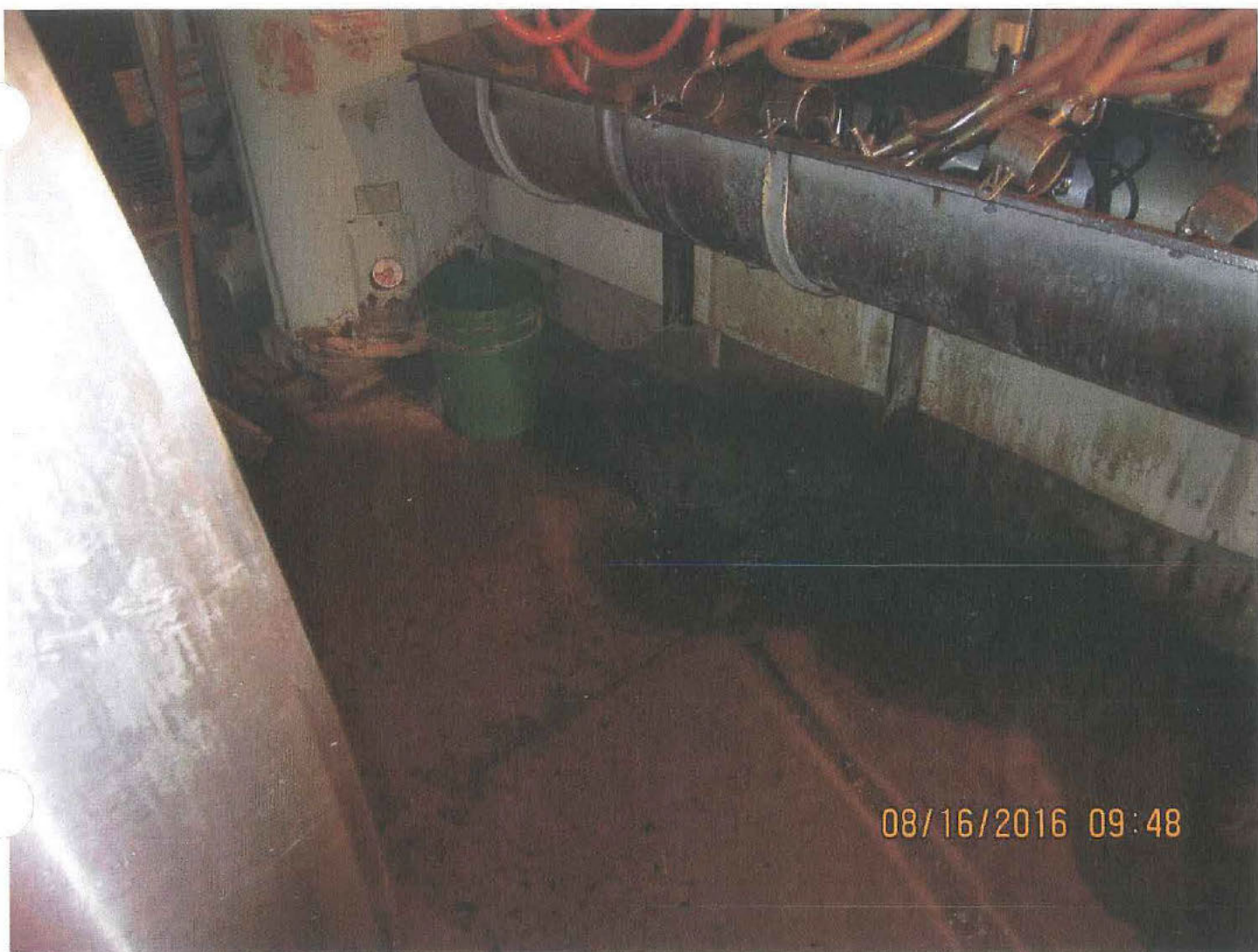
Florida	Adrian	Ida Grove
Newark	Hamler	Reider
Wheat	Orion	Leiper



HAMLER, OH
2013



ATTACHMENT 2
Inspection Photograph Log



Photograph No. 1 (file IMG_0711)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/16/16

Time: 9:48 AM (EDST)

Direction: Northeast

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: Floor drain along the east wall of the Milk Tank Room. There are three floor drains in this room.



Photograph No. 2 (file IMG_0722)

Site: FOIA EX. 6 Farms
(b) (5) DPP

Photographer: Paul Novak

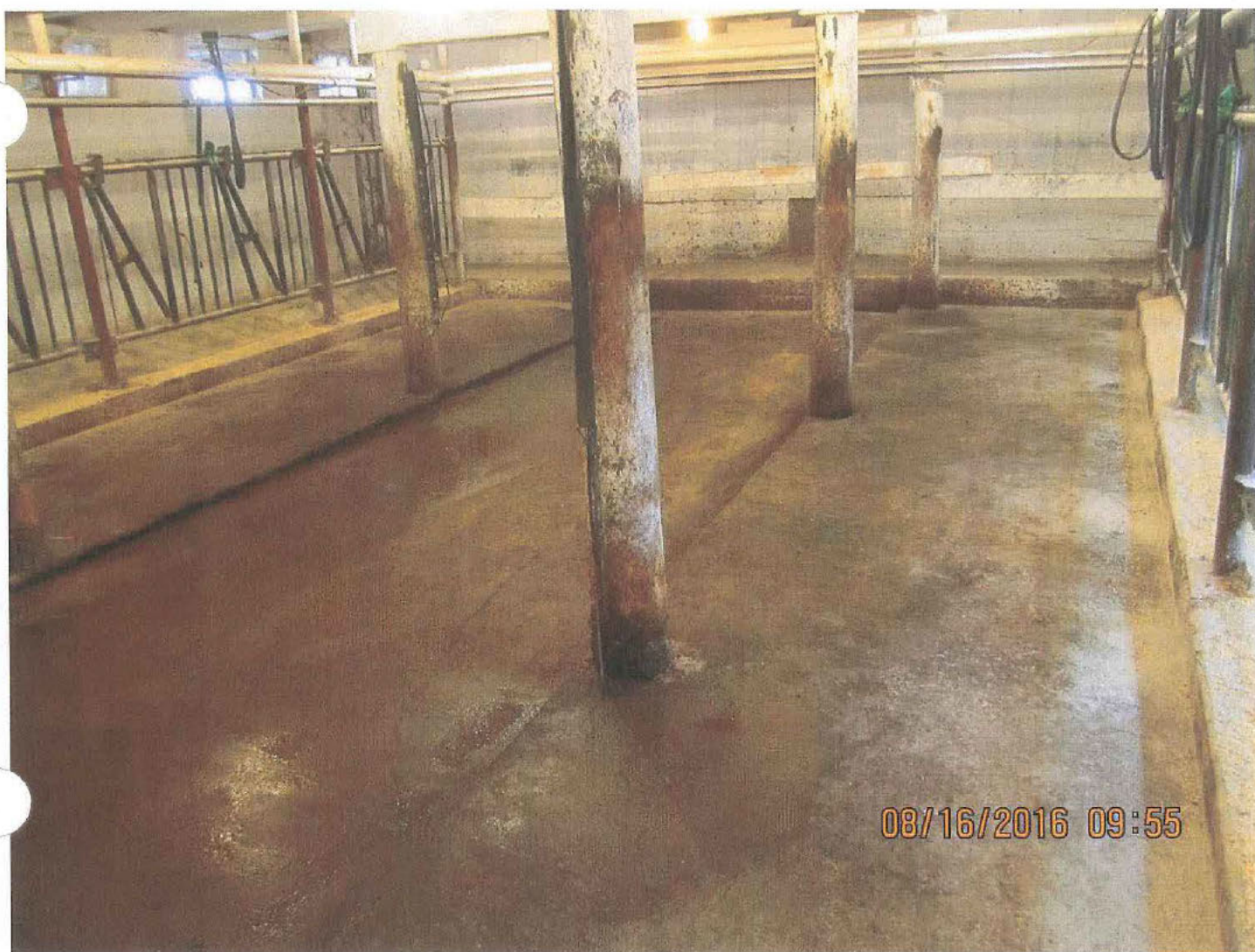
Date: 08/16/16

Time: 10:14 AM (EDST)

Direction: East

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: An exterior catch basin on the north side of the Milk Tank Room receives the floor drain drainage from the Milk Tank Room. Milk tanks are rinsed with well water and that rinse water is drained onto the floor of the Milk Tank Room to drain through the floor drains into this catch basin. This catch basin is plumbed via underground piping to discharge into the steel reception basin at the end of the drainage trench.



Photograph No. 3 (file IMG_0712)

Photographer: Paul Novak

Site: FOIA Ex. 6
(Personal) Farms

Date: 08/16/16

Time: 9:55 AM EDT

Direction: South/Southeast

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: There are no floor drains in the Milking Parlor. A skid steer is used to scrape manure from the floor and this manure is then dumped into the concrete Manure Storage Vault.



Photograph No. 4 (file IMG_0713)

Site: FOIA Ex. 6 Farms

Photographer: Paul Novak

Date: 08/16/16

Time: 9:56 AM (EDST)

Direction: South/Southwest

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: View of the concrete corral area on the east side of the Milking Parlor. Storm water run-off flows from this area to the north/northeast to the constructed drainage trench.



Photograph No. 5 (file IMG_0714)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

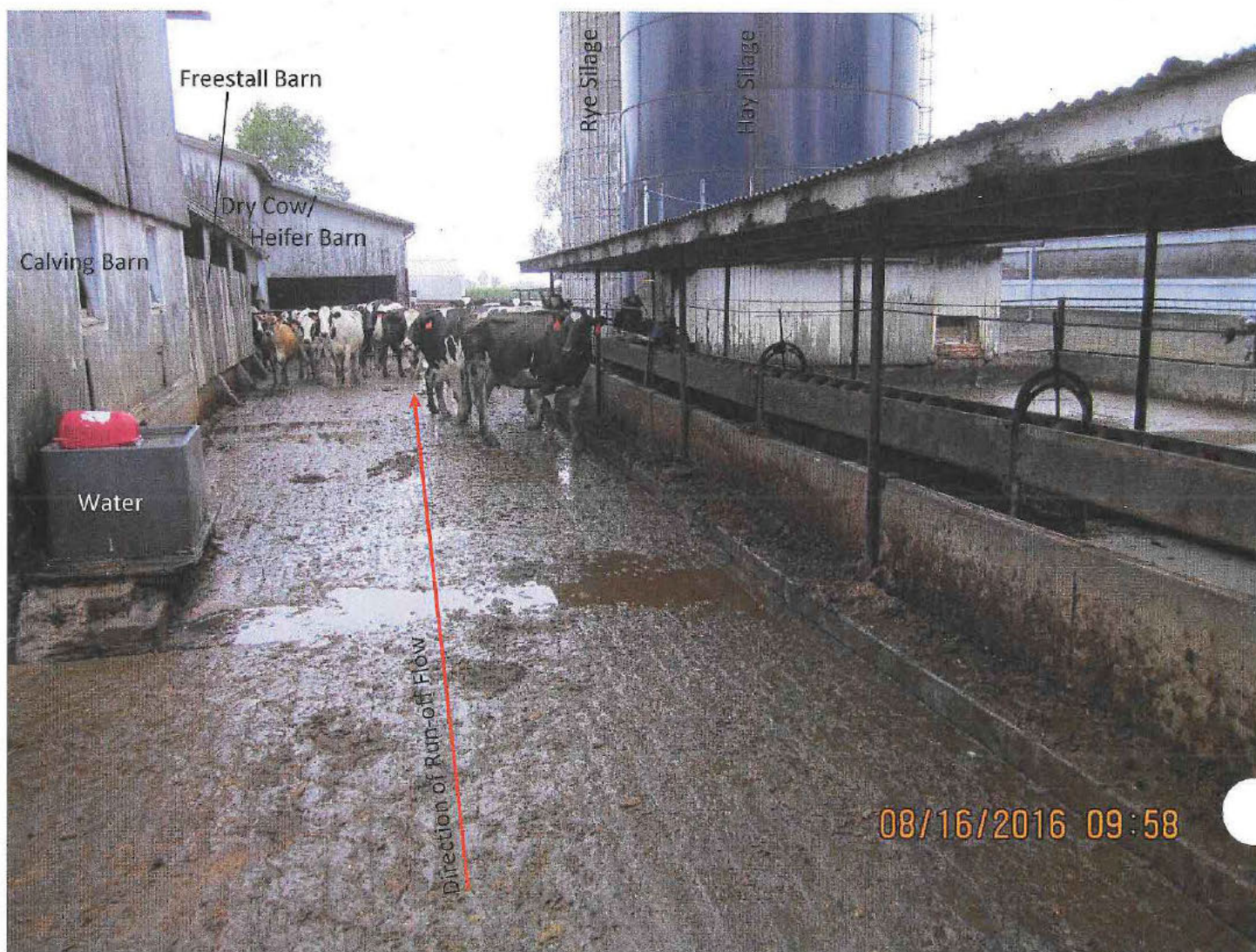
Date: 08/16/16

Time: 9:58 AM (EDST)

Direction: Northeast

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: Sand bedding in Freestall Barn. Cow lanes within Freestall Barn are scraped with a skid steer to remove manure and dump it into the concrete Manure Storage Vault.



Photograph No. 6 (file IMG_0715)

Site: FOIA EX. 6 Farms
(b)(7)(D)

Photographer: Paul Novak

Date: 08/16/16

Time: 9:58 AM (EDST)

Direction: North

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: Concrete corral area on east side of the Calving Barn and Freestall Barn. Storm water run-off flows north to the constructed drainage trench.



Photograph No. 7 (file IMG_0716)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/16/16

Time: 10:02 AM (EDST)

Direction: South

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: Concrete corral area on east side of the Dry Cow/Heifer Barn. Storm water run-off flows north/northeast to the constructed drainage trench.



Photograph No. 8 (file IMG_0717)

Site: FOIA Ex. 6 (Personal) Farms

Photographer: Paul Novak

Date: 08/16/16

Time: 10:05 AM (EDST)

Direction: West

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: Contaminated storm water run-off flows from the concrete corral areas into the drainage trench which flows east into a steel reception basin.



Photograph No. 9 (file IMG_0718)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/16/16

Time: 10:05 AM (EDST)

Direction: West

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: View into the steel reception basin at the east end of the constructed drainage trench. There is a small diameter hole cut into the steel wall of the basin to allow drainage to flow into the basin.



Photograph No. 10 (file IMG_0719)

Site: FOIA EX. 6 Farms
(Decontrol)

Photographer: Paul Novak

Date: 08/16/16

Time: 10:07 AM (EDST)

Direction: North

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: View looking north from the reception basin towards the crop field.



Photograph No. 11 (file IMG_0720)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/16/16

Time: 10:08 AM (EDST)

Direction: West

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: View of the Solids Storage Area where silage bags are stored along with manure solids piles and waste feed piles. Storm water run-off in this area can pool in depressed areas or drain north into the constructed drainage trench.



Photograph No. 12 (file IMG_0721)

Site: FOIA EX. 6 Farms

Photographer: Paul Novak

Date: 08/16/16

Time: 10:09 AM (EDST)

Direction: Northwest

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: View of the piles of waste feed, manure solids and an old compost pile stacked at the north end of the Solids Storage Area. Storm water run-off and leachate would drain east across the gravel driveway into the drainage trench.



Photograph No. 13 (file IMG_0742)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/17/16

Time: 9:01 AM (EDST)

Direction: North

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: Access hole into north end of concrete Manure Storage Vault that is adjacent to the Manure Slurry AST. There is a wooden cover that is used to cover the opening. This is the opening used to access the vault in order to pump manure liquids from the vault into the Manure Slurry AST. The vault is located on the east edge of the Manure Slurry AST.



Photograph No. 14 (file IMG_0743)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/17/16

Time: 9:01 AM (EDST)

Direction: South

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: Access holes into the south end of the concrete Manure Storage Vault. Wooden covers sit over the access-ways until access is needed to dump scraped manure into the vault.



Photograph No. 15 (file IMG_0725)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/16/16

Time: 10:18 AM (EDST)

Direction: North

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: The Weaned Calf Barn holds calves that are three to four months old. The gutter on the south side of this smaller barn is in disrepair and gutter run-off falls onto the ground.



Photograph No. 16 (file IMG_0723)

Site: FOIA Ex. 6 Farms

Photographer: Paul Novak

Date: 08/16/16

Time: 10:17 AM (EDST)

Direction: North

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: View of the concrete corral on the north side of the Weaned Calf Barn. There is a fenced grass and dirt pasture area to the west side of the corral which is used for the weaned calves. A concrete knee wall forms the perimeter around the corral area and prevents storm water run-off from leaving the corral. The section of concrete at this gated entrance to the corral is sloped towards the corral to prevent storm water run-off from leaving the corral area.



Photograph No. 17 (file IMG_0724)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/16/16

Time: 10:17 AM (EDST)

Direction: Northwest

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: View of the south fence of the fenced grass and dirt pasture area to the west side of the Weaned Calf Barn. This pasture area is used for the weaned calves. The partial elevated metal roof provides shade for the calves.



Photograph No. 18 (file IMG_0726)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/16/16

Time: 10:20 AM (EDST)

Direction: Northeast

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: The Calf Barn has individual calf pens with straw bedding. Calves stay in this barn until 3 months old. The east barn door opens into a fenced concrete pad area that wraps around the east and south sides of the Calf Barn.



Photograph No. 19 (file IMG_0727)

Site: FOIA Ex. 6 (Personal) Farms

Photographer: Anne Marie Vincent

Date: 08/16/16

Time: 11:21 AM (EDST)

Direction: East

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: View of the open end of the silage bag currently in use. Due to the slope of the ground surface, storm water run-off flows towards the Solids Storage Area which drains north into the constructed drainage trench, according to Ex. 6 (Personal Privacy)



Photograph No. 20 (file IMG_0728)

Site: FOIA Ex. 6
(b)(7)(D) Farms

Photographer: Anne Marie Vincent

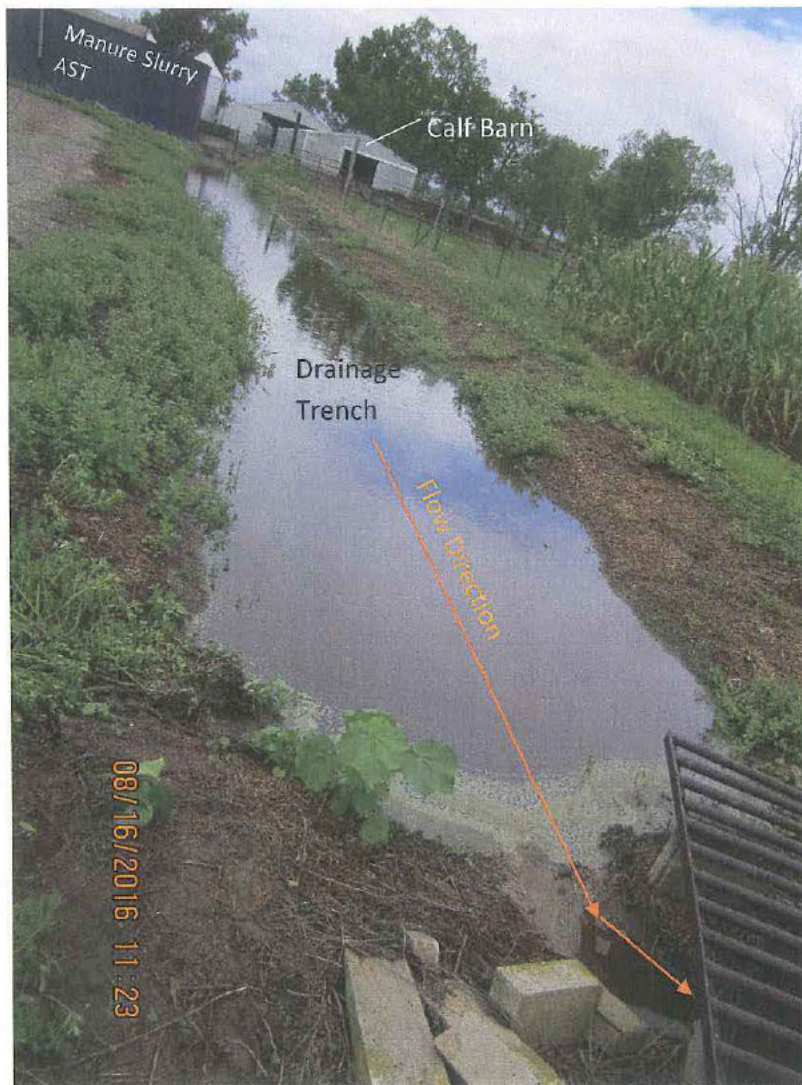
Date: 08/16/16

Time: 11:23 AM (EDST)

Direction: North/Northeast

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: View of the drainage trench inlet into the steel reception basin where sample S01 was collected. The sample was collected from the inlet opening from the inside of the basin wall as flow entered the basin.



Photograph No. 21 (file IMG_0729)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Anne Marie Vincent

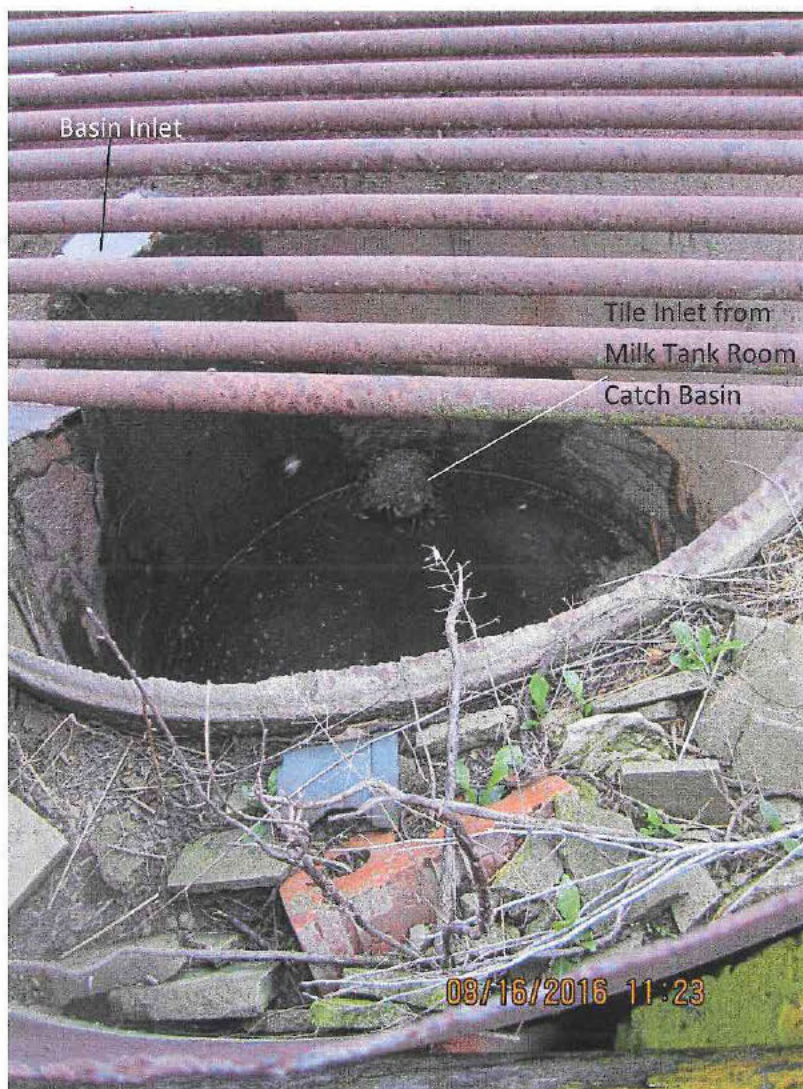
Date: 08/16/16

Time: 11:23 AM (EDST)

Direction: West/Northwest

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: View looking at the constructed drainage trench which flows into the steel reception basin. Storm water run-off from the concrete corral areas on the east sides of the Dry Cow/Heifer Barn, Freestall Barn, Calving Barn and Milking Parlor; as well as the east and south sides of the Calf Barn, flows to a central drainage point adjacent to the north side of the Manure Slurry AST. This drainage point directs run-off flow into the west end of the constructed drainage trench in the production area.



Photograph No. 22 (file IMG_0730)

Site: FOIA Ex. 6 Farms

Photographer: Anne Marie Vincent

Date: 08/16/16

Time: 11:23 AM (EDST)

Direction: West/Northwest

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: View of the inlet into the steel reception basin from the drainage trench and the tile inlet from the catch basin outside the north wall of the Milk Tank Room. Milk Tank rinse water flows into floor drains in the Milk Tank Room which are plumbed to the exterior catch basin. A tile directs flow from the exterior catch basin to the reception basin as seen in this photograph.



Photograph No. 23 (file IMG_0731)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Anne Marie Vincent

Date: 08/16/16

Time: 11:24 AM (EDST)

Direction: East

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: View of the Solids Storage Area, the constructed drainage trench and the steel Reception Basin that receives the drainage trench flow.



Photograph No. 24 (file IMG_0732)

Photographer: Anne Marie Vincent

Site: FOIA Ex. 6 Farms
(Personal)

Date: 08/16/16

Time: 11:25 AM (EDST)

Direction: Southeast

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: View from the east side of the corn silage silo, looking southeast at the overcast skies towards County Road Y.



Photograph No. 25 (file IMG_0733)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/16/16

Time: 12:15 PM (EDST)

Direction: Southeast

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: The first accessible point on the unnamed tributary waterway downstream from the FOIA Ex. 6 Farm
(Personal) Satellite Facility is at the roadway crossing on Township Road B. This unnamed tributary receives contaminated storm water run-off from a reception basin for the corral area at the Satellite Facility. This view is looking upstream from the roadway crossing on Township Road B.



Photograph No. 26 (file IMG_0734)

Site: FOIA Ex. 6 (Personal) Farms

Photographer: Paul Novak

Date: 08/16/16

Time: 12:16 PM (EDST)

Direction: Northwest

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: The first accessible point on the unnamed tributary waterway downstream from the FOIA Ex. 6 (Personal) Farms Satellite Facility is at the roadway crossing on Township Road B. This unnamed tributary receives contaminated storm water run-off from a reception basin for the corral area at the Satellite Facility. This view is looking downstream from the roadway crossing on Township Road B. The FOIA Ex. 6 (Personal) Farms Dairy is visible in the background.



Photograph No. 27 (file IMG_0735)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/16/16

Time: 12:28 PM (EDST)

Direction: Southwest

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: The first accessible point on Mess Ditch, downstream from the FOIA Ex. 6 Farms Dairy and Satellite Facility is at the roadway crossing on County Road 12. Both unnamed tributaries that receive the discharges from the contaminated storm water reception basins at the dairy and satellite facilities are tributary to Mess Ditch. This view is looking upstream at Mess Ditch from the roadway crossing on County Road 12.



Photograph No. 28 (file IMG_0736)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

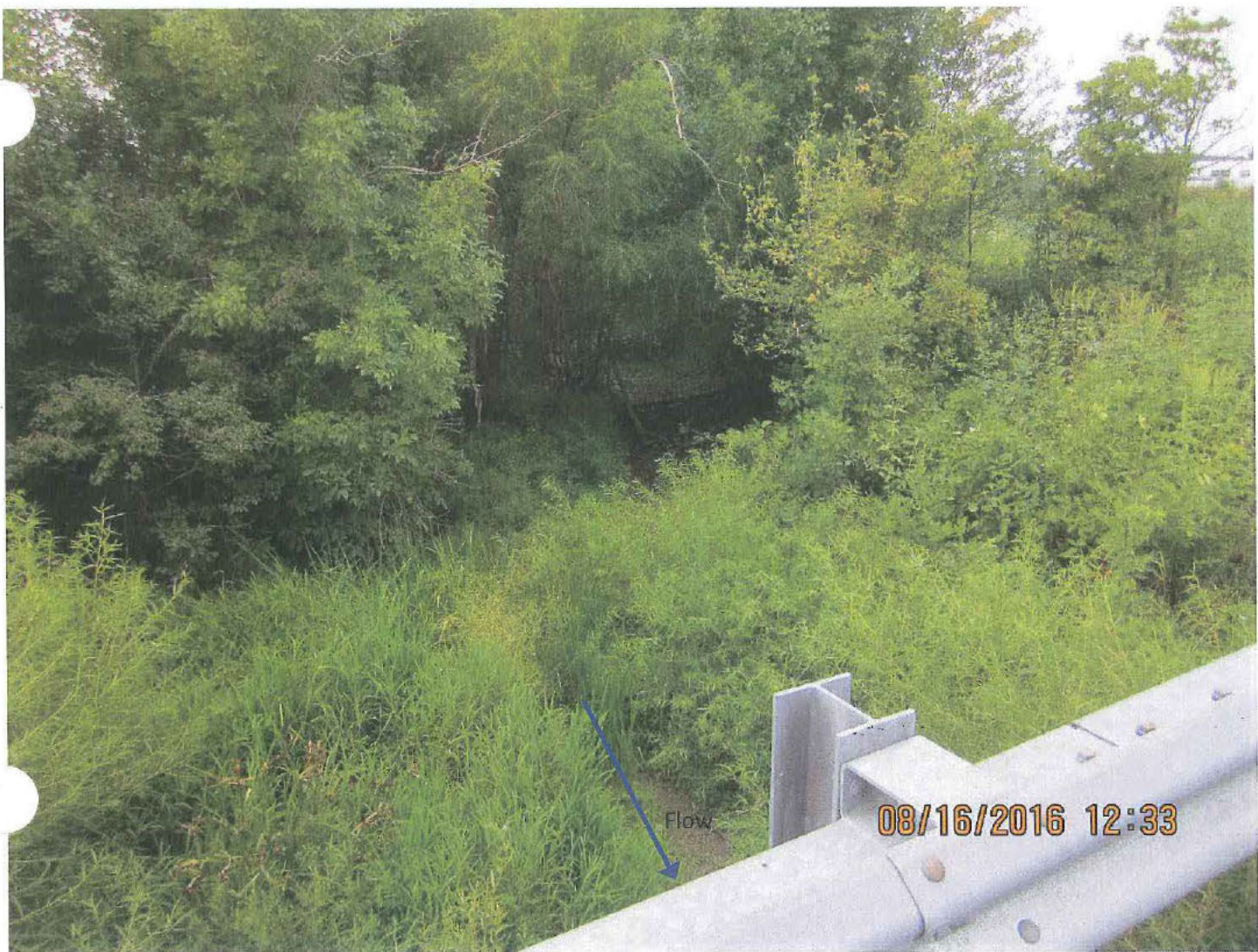
Date: 08/16/16

Time: 12:29 PM (EDST)

Direction: Northeast

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: The first accessible point on Mess Ditch, downstream from the FOIA Ex. 6 Farms Dairy and Satellite Facility is at the roadway crossing on County Road 12. Both unnamed tributaries that receive the discharges from the contaminated storm water reception basins at the dairy and satellite facilities are tributary to Mess Ditch. This view is looking downstream at Mess Ditch from the roadway crossing on County Road 12.



Photograph No. 29 (file IMG_0737)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

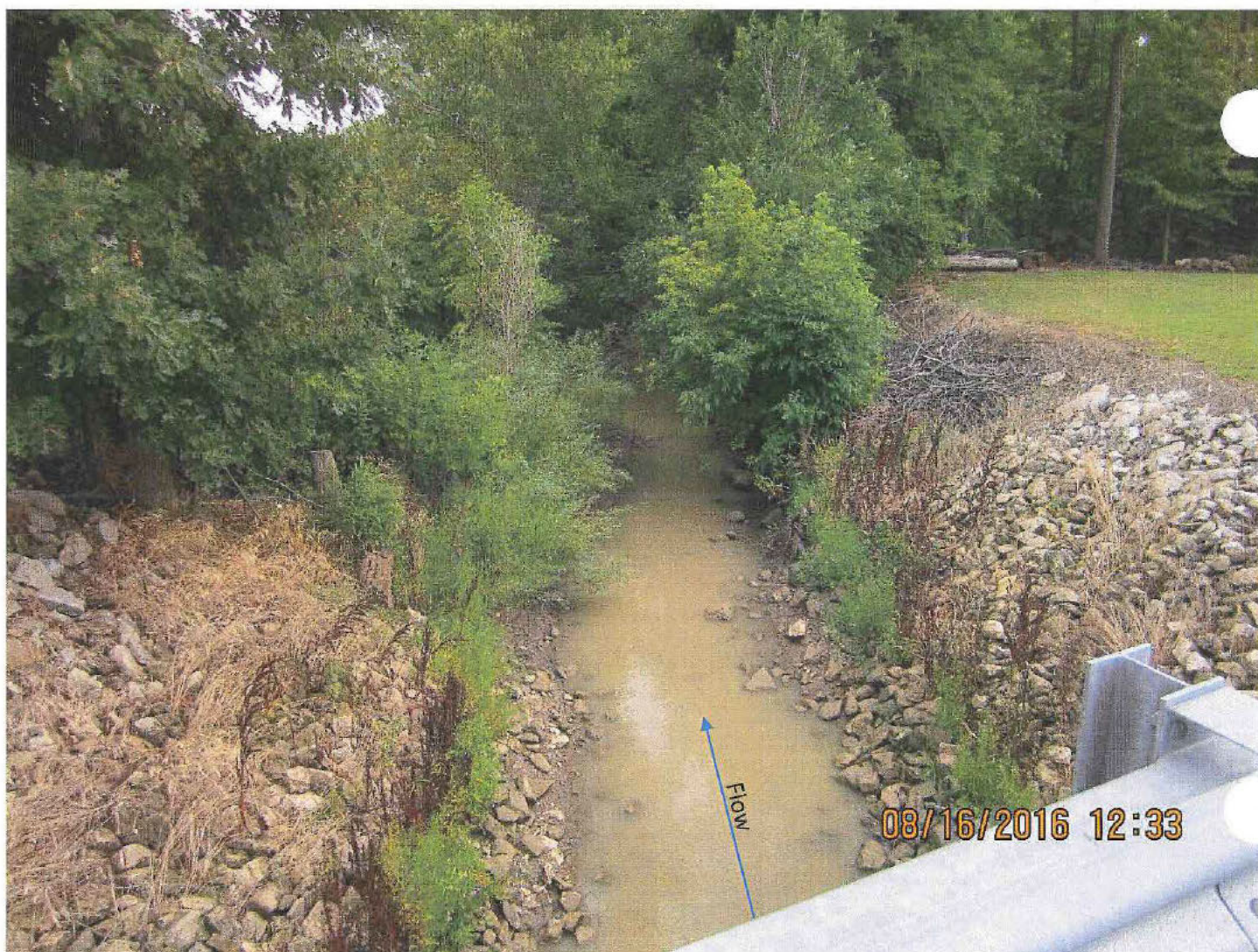
Date: 08/16/16

Time: 12:33 PM (EDST)

Direction: South/Southwest

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: The next accessible point on Mess Ditch, downstream from the FOIA Ex. 6 Farms Dairy and Satellite Facility is at the roadway crossing on Township Road D. This view is looking upstream at Mess Ditch from the roadway crossing on Township Road D.
(Personal)



Photograph No. 30 (file IMG_0738)

Site: FOIA Ex. 6 (Personal) Farms

Photographer: Paul Novak

Date: 08/16/16

Time: 12:33 PM (EDST)

Direction: North/Northeast

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: The next accessible point on Mess Ditch, downstream from the FOIA Ex. 6 (Personal) Farms Dairy and Satellite Facility is at the roadway crossing on Township Road D. This view is looking downstream at Mess Ditch from the roadway crossing on Township Road D.



Photograph No. 31 (file IMG_0739)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/16/16

Time: 12:41 PM (EDST)

Direction: South

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: The next accessible point on the unnamed tributary waterway downstream from the FOIA Ex. 6 Farms Satellite Facility is at the roadway crossing on Township Road 12, just south of the intersection of Township Road 12 and County Road Y. This unnamed tributary receives contaminated storm water run-off from a reception basin for the corral area at the Satellite Facility upstream of this location. At this roadway crossing, on the west side of the road, flow from the unnamed tributary joins with the flow in the roadside ditch and continues to flow northwest into the next unnamed tributary waterway which flows north into Mess Ditch.



Photograph No. 32 (file IMG_0740)

Site: FOIA Ex. 6 (Personal) Farms

Photographer: Paul Novak

Date: 08/16/16

Time: 12:41 PM (EDST)

Direction: East/Southeast

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: The next accessible point on the unnamed tributary waterway downstream from the FOIA Ex. 6 (Personal) Farms Satellite Facility is at the roadway crossing on Township Road 12, just south of the intersection of Township Road 12 and County Road Y. This unnamed tributary receives contaminated storm water run-off from a reception basin for the corral area at the Satellite Facility upstream of this location. This is a view looking upstream from this roadway crossing on Township Road 12.



Photograph No. 33 (file IMG_0741)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/16/16

Time: 4:20 AM (EDST)

Direction: North

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: Samples packaged for shipment to laboratory via UPS.



Photograph No. 34 (file IMG_0744)

Site: FOIA EX. 6 (Personal) Farms

Photographer: Paul Novak

Date: 08/17/16

Time: 9:17 AM (EDST)

Direction: Northeast

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: FOIA EX. 6 (Personal) Farms Satellite Facility for steers and heifers.



Photograph No. 35 (file IMG_0745)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/17/16

Time: 9:18 AM (EDST)

Direction: North

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: A fenced and divided corral is located between the heifer barn and the steer barn at the Satellite Facility. Contaminated storm water run-off from the corral flows to the southeast corner of the corral, through a drainage hole in the concrete knee wall and into a concrete reception basin.



Photograph No. 36 (file IMG_0748)

Site: FOIA EX. 6 Farms
(b)(7)(D)

Photographer: Paul Novak

Date: 08/17/16

Time: 9:22 AM (EDST)

Direction: Northwest

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: Storm water run-off from the corral area had pooled at the gated entrance into the corral. In this photograph the drainage hole in the knee wall and the concrete reception basin for storm water run-off can be seen.



Photograph No. 37 (file IMG_0747)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/17/16

Time: 9:20 AM (EDST)

Direction: Northwest

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: Drainage hole through the concrete knee wall allows contaminated storm water run-off in the corral to drain into the reception basin. The corrugated metal pipe protruding from the gravel is an old drain pipe that used to discharge surface drainage from the grass area around the barns into the reception basin. According to Ex. 6. (Personal Privacy) this drain pipe was previously disconnected and no longer discharges into the basin.



Photograph No. 38 (file IMG_0746)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/17/16

Time: 9:18 AM (EDST)

Direction: North

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: Contaminated storm water run-off from the east side of the corral also flows through a breach in the easternmost corner of the knee wall. The breach is circled in the photograph above. The run-off then flows into the reception basin. According to Ex. 6, (Personal Privacy) this reception basin was constructed with an outlet pipe that directs the run-off in the basin to a nearby ditch. According to topographic maps, an unnamed intermittent tributary waterway is located approximately ½ mile east/northeast from the facility.



Photograph No. 39 (file IMG_0749)

Site: FOIA Ex. 6 Farms
(Personal)

Photographer: Paul Novak

Date: 08/17/16

Time: 9:50 AM (EDST)

Direction: South/Southwest

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: First accessible location to West Creek on County Road 10A, approximately ½ mile from the confluence of Mess Ditch and Gustwiller Ditch which forms West Creek. This is the view looking upstream.



Photograph No. 40 (file IMG_0750)

Site: FOIA Ex. 6 Farms

Photographer: Paul Novak

Date: 08/17/16

Time: 9:50 AM (EDST)

Direction: North/Northeast

Camera: Canon PowerShot SD1400IS, Serial Number 212065043416; digital media

Description: First accessible location to West Creek on County Road 10A, approximately ½ mile from the confluence of Mess Ditch and Gustwiiller Ditch which forms West Creek. This is the view looking downstream.

ATTACHMENT 3
Annotated Aerial Map Overview



FOIA Ex. 6
(Personal)

Farms Dairy and Satellite Location Overview Aerial

LEGEND

Direction of Waterway Flow













Aerial photograph annotated by Anne Marie Vincent
(U.S. EPA Region 5) October 2016

Imagery from US Geological Survey, 2013 ,Hamler Quadrangle,
Ohio 7.5-Minute Series

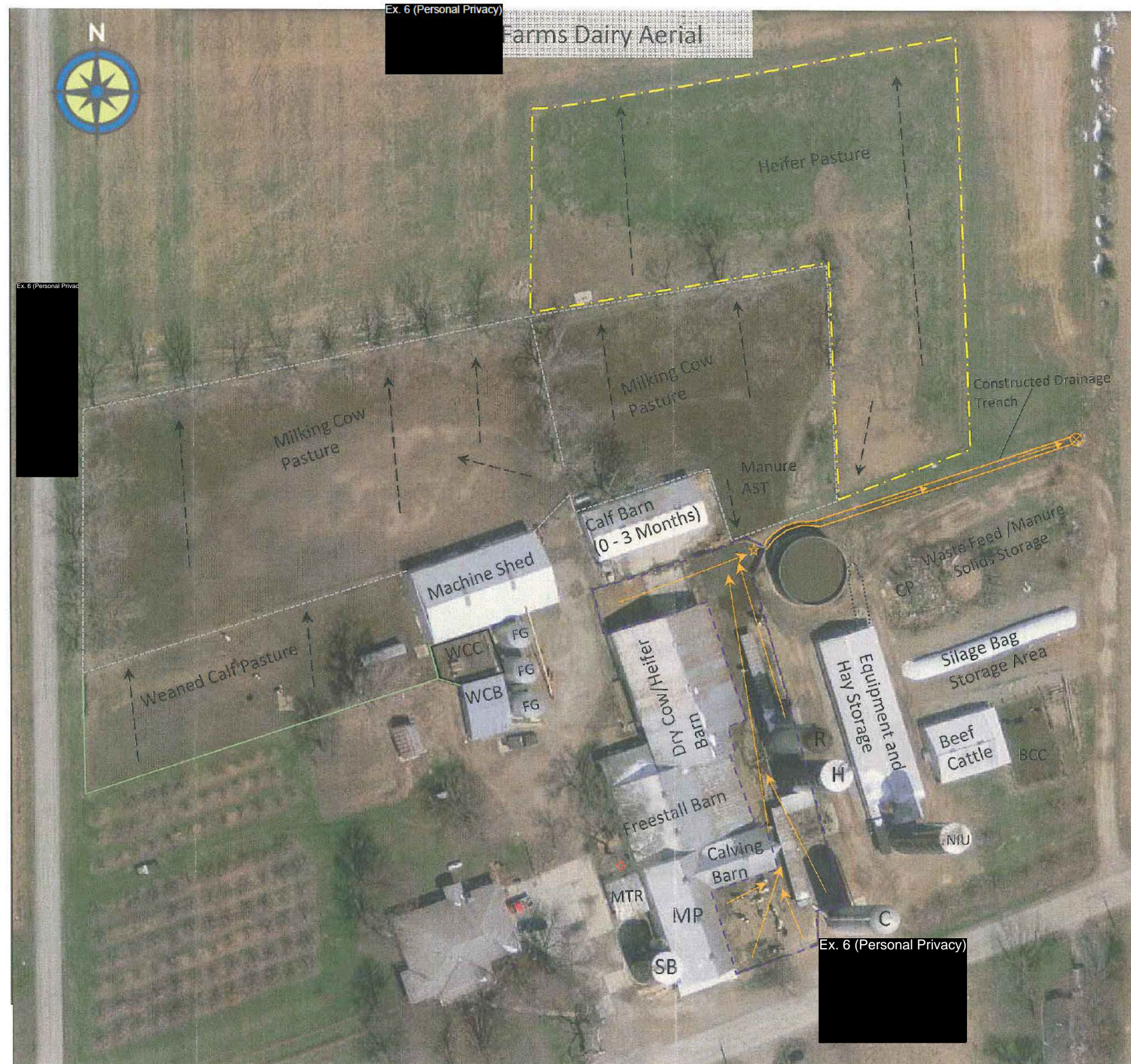
ATTACHMENT 4
Annotated Aerial of Dairy

LEGEND

Milking Parlor	MP
Milk Tank Room	MTR
Milk Tank Room Catch Basin	
Concrete Manure Storage Vault	
Manure Slurry Aboveground Storage Tank	Manure AST
Weaned Calf Barn (3 to 4 Months Old)	WCB
Field Grain Storage Bins	FG
Rye Silage Silo	R
Corn Silage Silo	C
Hay Silage Silo	H
Soy Bean Meal	SB
Old Compost Pile	CP
Beef Cattle Dirt Corral Area	BCC
Weaned Calf Concrete Corral (3 Foot Concrete Knee Wall with Fencing)	WCC
Milking Cow Pasture Area Fence	
Heifer Pasture Area Fence	
Weaned Calf Pasture Area Fence	
Pasture Storm Water Surface Drainage Flow	
Production Area Storm Water Surface Drainage Flow	
Concrete Corral Area within Production Area	
Corral Run-off Collection Area	
Reception Basin for Storm Water Run-Off	
Not In Use	NIU

NOTE: Drawn in shapes are meant to be approximate representations of location.

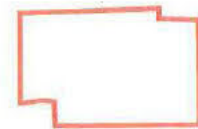
Aerial photograph from Henry County GIS Parcel Database (esri)
annotated by Anne Marie Vincent (U.S. EPA Region 5) October 2016



ATTACHMENT 5
Annotated Aerial of Satellite Facility

LEGEND

Divided Corral with Concrete Floor



Fence Corral Divider



Solid Manure Storage Location



Contaminated Storm Water Overland Flow



Catch Basin



Holes in Knee Wall
(Direct Flow into Reception Basin)



Feed Bin



NOTE: Drawn in shapes are meant to be approximate representations of location.

Aerial photograph annotated by Anne Marie Vincent
(U.S. EPA Region 5) October 2016

Imagery ©2016 Google, Map Data © 2016 Google



ATTACHMENT 6
Sampling Data Packages
And
Chain of Custody Forms



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

WORK ORDER

Printed: 8/23/2016 1:29:05PM

1608011

US EPA Region 5 Chicago Regional Laboratory

Client: Office of Enforcement and Compliance Assurance

Project Manager: Angela Ockrassa Davis

Project: **FOIA Ex. 6**
(Personal) Farm

Project Number: CV-01-16

Report To:

Paul Noyak

77 W. Jackson

Phone: (440) 250-1714

Office of Enforcement and Compliance Assurance

Chicago, IL 60604

Fax: (312) 886-2591

Date Due: Oct-02-16 15:00 (45 day TAT)

Received By: Robert Snyder

Date Received: Aug-17-16 10:00

Logged In By: Robert Snyder

Date Logged In: Aug-17-16 10:43

Samples Received at: 2.9 °C

Work Order Comments:

Sample, tags/labels: Yes

pH paper LIMS ID 16B1201

Seals Intact: Yes

Received on ice: Yes

Paperwork Included: Yes

Sample ID: 1608011-01

Sampled: Aug-16-16 10:50

Matrix: Water

Sample Name: S01

Sample Location: Runoff from swale before catch basin

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Sep-13-16 10:50	pH = 1
BOD	2	Aug-18-16 10:50	pH = 8
Nitrate-Nitrite N DA	28	Sep-13-16 10:50	pH = 1
Solids, TDS	7	Aug-23-16 10:50	pH = 8
Solids, TSS	7	Aug-23-16 10:50	pH = 8
TKN DA	28	Sep-13-16 10:50	pH = 1
Total Phosphorus DA	28	Sep-13-16 10:50	pH = 1

WORK ORDER

Printed: 8/23/2016 1:29:05PM

1608011

US EPA Region 5 Chicago Regional Laboratory

Client: Office of Enforcement and Compliance Assurance
Project: **FOIA EX. 6** FarmProject Manager: Angela Ockrassa Davis
Project Number: CV-01-16Sample ID: 1608011-02Sampled: Aug-16-16 15:45Matrix: WaterSample Name: B02Sample Location: Blanks

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Sep-13-16 15:45	pH = 1
BOD	2	Aug-18-16 15:45	pH = 5
Nitrate-Nitrite N DA	28	Sep-13-16 15:45	pH = 1
Solids, TDS	7	Aug-23-16 15:45	pH = 5
Solids, TSS	7	Aug-23-16 15:45	pH = 5
TKN DA	28	Sep-13-16 15:45	pH = 1
Total Phosphorus DA	28	Sep-13-16 15:45	pH = 1

WORK ORDER MEMO: Work order login review complete -- AW 08.17.16



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CHICAGO REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605

Date: 9/13/2016
Subject: Review of Region 5 Data for **FOIA Ex. 6** Farm
To: Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago, IL 60604
From: Colia Breslin, Chemist
US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

x Colia Breslin 9/13/2016

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: **FOIA Ex. 6** Farm

Data Coordinator and Date Transmitted

Analyses included in this report:

BOD



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA Ex. 6** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-13-16 07:10

Analysis Case Narrative

General Information

Two water samples for the analysis of 5-day biochemical oxygen demand (BOD5) were received at the Chicago Regional Laboratory (CRL) on August 17, 2016. The samples met the temperature preservation requirement of less than or equal to 6 °C. The samples were analyzed within the 48 hour hold time. The designated analyst, Colin Breslin, can be reached at 312-886-2912.

The samples were prepared and analyzed according to CRL SOP AIG006A, Version #1 (based on SM 5210B).

Sample Analysis and Results

The data reported herein meets the requirements referenced in the SOP used for analysis and any laboratory specifications stated in the Quality Assurance Project Plan (QAPP) titled "General Field Sampling Plan for AFC Inspections" and dated FY 2016.

The result for sample 1608011-01 was flagged "L - The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value" because the glucose/glutamic (GGA) acid check solution was recovered below the quality control limit. See below under Quality Control for an explanation.

The result for sample 1608011-02 was flagged "UJ - The analyte was not detected at or above the reported limit. The reported limit is an estimate". This flag was applied for the low GGA recovery and because there were no valid depletions greater than the minimum requirement for a difference of at least 2 mg/L of dissolved oxygen in the readings from the initial day to the final day.

Quality Control

All Quality Control (QC) audits were within CRL limits for the requested analytes or did not result in qualification of the data, except:

Glucose/Glutamic Acid (GGA) Check Solution:

The averaged result for the GGA check solution was recovered at 135.4 mg/L (68.4%), which fell outside the prescribed recovery limits of 167.5 – 228.5 mg/L (84.6 – 115.4%). The low recovery was likely due to the use of a synthetic seed source. A wastewater treatment plant (WWTP) seed source could not be obtained within the sample holding time limit and the synthetic seed had to be used. Low recoveries of the GGA solution have been typical for the synthetic seed. Even though the synthetic seed was used the field sample itself likely had



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-13-16 07:10

sufficient microorganisms to induce oxygen demand from carbonaceous materials, however the result remains flagged with a potential low bias.



Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA Ex. 6 (Personal)** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-13-16 07:10

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1608011-01	Water	Aug-16-16 10:50	Aug-17-16 10:00
B02	1608011-02	Water	Aug-16-16 15:45	Aug-17-16 10:00

BOD, 5 day, SM 5210 B (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1608011-01) Matrix: Water Sampled: Aug-16-16 10:50 Received: Aug-17-16 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyz
Biochemical Oxygen Demand	240	L		2	mg/L	1	B16H033	Aug-17-16	Aug-17-

B02 (1608011-02) Matrix: Water Sampled: Aug-16-16 15:45 Received: Aug-17-16 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Biochemical Oxygen Demand	U	U		2	mg/L	1	B16H033	Aug-17-16	Aug-17-16



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA Ex. 6** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-13-16 07:10

Notes and Definitions

- UJ The analyte was not detected at or above the reported limit. The reported limit is an estimate.
- L The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- U Not Detected
- NR Not Reported
- Q QC limit Exceeded



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

WORK ORDER

Printed: 8/17/2016 6:18:10PM

1608011

US EPA Region 5 Chicago Regional Laboratory

Client: Office of Enforcement and Compliance Assurance
Project: **FOIA Ex. 6** Farm
(Personal)

Project Manager: Angela Ockrassa Davis
Project Number: CV-01-16

Report To:

Paul Novak
Office of Enforcement and Compliance Assurance

77 W. Jackson
Chicago, IL 60604

Phone: (440) 250-1714
Fax: (312) 886-2591

Date Due: Oct-02-16 15:00 (45 day TAT)

Received By: Robert Snyder

Date Received: Aug-17-16 10:00

Logged In By: Robert Snyder

Date Logged In: Aug-17-16 10:43

Samples Received at: 2.9 °C

Work Order Comments:

Sample tags/labels Yes

pH paper LIMS ID 16B1201

Seals Intact Yes

Received on ice Yes

Paperwork Included Yes

Sample ID: 1608011-01

Sampled: Aug-16-16 10:50

Matrix: Water

Sample Name: S01

Sample Location: Runoff from swale before catch basin

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Sep-13-16 10:50	pH = 1
BOD	2	Aug-18-16 10:50	pH = 8
Nitrate-Nitrite N DA	28	Sep-13-16 10:50	pH = 1
Solids, TDS	7	Aug-23-16 10:50	pH = 8
Solids, TSS	7	Aug-23-16 10:50	pH = 8
TKN DA	28	Sep-13-16 10:50	pH = 1
Total Phosphorus DA	28	Sep-13-16 10:50	pH = 1

WORK ORDER

Printed: 8/17/2016 6:18:10PM

1608011

US EPA Region 5 Chicago Regional Laboratory

Client: Office of Enforcement and Compliance Assurance
Project: **FOIA Ex. 6** Farm

Project Manager: Angela Ockrassa Davis
Project Number: CV-01-16

Sample ID: 1608011-02Sampled: Aug-16-16 15:45Matrix: WaterSample Name: B02Sample Location: Blanks

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Sep-13-16 15:45	pH = 1
BOD	2	Aug-18-16 15:45	pH = 5
Nitrate-Nitrite N DA	28	Sep-13-16 15:45	pH = 1
Solids, TDS	7	Aug-23-16 15:45	pH = 5
Solids, TSS	7	Aug-23-16 15:45	pH = 5
TKN DA	28	Sep-13-16 15:45	pH = 1
Total Phosphorus DA	28	Sep-13-16 15:45	pH = 1

WORK ORDER MEMO: Work order login review complete -- AW 08.17.16



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605



LABORATORY
ACCREDITATION
BUREAU

ACCREDITED ISO/IEC 17025

Certificate # L2280 Testing

Date: 9/16/2016

Subject: Review of Region 5 Data for **FOIA EX. 6** Farm

To: Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago, IL 60604

From: Laurence Wong, SEEP Analyst
US EPA Region 5 Chicago Regional Laboratory

Analyst is a (check one): ☒ SEE Enrollee ☐ ORISE Participant ☐ Contractor
Grantee Organization or Contract Company: NAPCA
Assigned to the Chicago Regional Laboratory at U.S. EPA, Region 5
Reviewed by (initials, date): FAA 9/19/2016, chemist at Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X Laurence Wong September 16, 2016

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: **FOIA EX. 6**
(Personal Privacy) Farm

Data Coordinator and Date Transmitted

Analyses included in this report:

Solids, TSS



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA Ex** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-16-16 17:49

ANALYSIS CASE NARRATIVE

General Information

Two (2) water samples under Work Order #1608011 were received on August 17, 2016 for Total Suspended Solids (TSS) analysis. The designated analyst was Laurence Wong; and the contact person, Francis Awanya (phone number: 312-886-3682).

The sample preparation and analysis began on August 22, 2016, and were completed on August 23, 2016. The samples were kept in refrigerator at $\leq 6^{\circ}\text{C}$ at all-time except when in use. The sample holding time limit was met. Other pertinent information is provided in the final analysis report. The sample preparation and analysis followed procedure CRL SOP AIG018 Version #2 (based on Standard Method 2540 D).

Sample Analysis and Results

The data reported herein met the QAPP for animal feed operations "FY 2016 General Field Sampling Plan 11162015" and the "2014 reporting request for CAFO samples 062014".

Quality Control

All quality control (QC) audits followed CRL guidelines. The required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits except for the duplicate audit. The duplicate audit prepared using source sample #1608011-01 (field designation S01) slightly exceeded the QC limit of 10% (RPD value 12.1%), apparently a result of sample inhomogeneity. The corresponding sample result is thus flagged "J" as estimated.



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-16-16 17:49

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1608011-01	Water	Aug-16-16 10:50	Aug-17-16 10:00
B02	1608011-02	Water	Aug-16-16 15:45	Aug-17-16 10:00

Total Suspended Solids, SM 2540 D (modified)

US EPA Region 5 Chicago Regional Laboratory

S01 (1608011-01) Matrix: Water Sampled: Aug-16-16 10:50 Received: Aug-17-16 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	262	J		5	mg/L	1	B16H037	Aug-22-16	Aug-22-16

B02 (1608011-02) Matrix: Water Sampled: Aug-16-16 15:45 Received: Aug-17-16 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Suspended Solids	0			5	mg/L	1	B16H037	Aug-22-16	Aug-22-16



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA Ex** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-16-16 17:49

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago, IL, 60604

Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-16-16 17:49

Notes and Definitions

- J The identification of the analyte is acceptable; the reported value is an estimate.
- U Not Detected
- NR Not Reported
- Q QC limit Exceeded



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CHICAGO REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605



Date: 9/16/2016
Subject: Review of Region 5 Data for **FOIA EX. 6** Farm
To: Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago, IL 60604
From: Laurence Wong, SEEP Analyst
US EPA Region 5 Chicago Regional Laboratory

Analyst is a (check one): ☒ SEE Enrollee ☐ ORISE Participant ☐ Contractor
Grantee Organization or Contract Company: NAPCA
Assigned to the Chicago Regional Laboratory at U.S. EPA, Region 5
Reviewed by (initials, date): RM 9/19/2016, chemist at Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X Laurence Wong September 16, 2016

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: **FOIA EX. 6** Farm
(Personal)

Data Coordinator and Date Transmitted

Analyses included in this report:

Solids, TDS



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA Ex** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-16-16 17:42

ANALYSIS CASE NARRATIVE

General Information

Two (2) water samples under Work Order #1608011 were received on August 17, 2016 for Total Dissolved Solids (TDS) analysis. The designated analyst was Laurence Wong; and the contact person, Francis Awanya (phone number: 312-886-3682).

The sample preparation and analysis began on August 22, 2016, and were completed on August 24, 2016. The samples were kept in refrigerator at $\leq 6^{\circ}\text{C}$ at all-time except when in use. The sample holding time limit was met. Other pertinent information is provided in the final analysis report. The sample preparation and analysis followed procedure CRL SOP AIG017 Version #3 (based on Standard Method 2540 C).

Sample Analysis and Results

The data reported herein met the QAPP for animal feed operations "FY 2016 General Field Sampling Plan 11162015" and the "2014 reporting request for CAFO samples 062014".

Quality Control

All quality control (QC) audits followed CRL guidelines. The required quality control criteria for the laboratory, method, and system performance audits were evaluated and determined to be within the CRL's QC limits.



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA Ex. 6 (Personal)** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-16-16 17:42

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1608011-01	Water	Aug-16-16 10:50	Aug-17-16 10:00
B02	1608011-02	Water	Aug-16-16 15:45	Aug-17-16 10:00

Dissolved Solids, SM 2540C (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1608011-01) Matrix: Water Sampled: Aug-16-16 10:50 Received: Aug-17-16 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	1380			20.0	mg/L	1	B16H036	Aug-22-16	Aug-22-16

B02 (1608011-02) Matrix: Water Sampled: Aug-16-16 15:45 Received: Aug-17-16 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Dissolved Solids	U			20.0	mg/L	1	B16H036	Aug-22-16	Aug-22-16



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Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-16-16 17:42

Analyte	Result	Flags/ Qualifiers	MDL	Reporting Limit	Units	Spill Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
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Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-16-16 17:42

Notes and Definitions

U Not Detected
NR Not Reported
Q QC-limit Exceeded



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

WORK ORDER

Printed: 9/15/2016 11:17:29AM

1608011

US EPA Region 5 Chicago Regional Laboratory

Client: **Office of Enforcement and Compliance Assurance**
Project: **FOIA Ex. 6 Farm**
(Personal)

Project Manager: **Angela Ockrassa Davis**
Project Number: **CV-01-16**

Report To:

Paul Novak
Office of Enforcement and Compliance Assurance

77 W. Jackson
Chicago, IL 60604

Phone: (440) 250-1714
Fax: (312) 886-2591

Date Due: **Oct-02-16 15:00 (45 day TAT)**
Received By: **Robert Snyder**
Logged In By: **Robert Snyder**

Date Received: **Aug-17-16 10:00**
Date Logged In: **Aug-17-16 10:43**

Samples Received at: **2.9 °C**
Sample tags/labels **Yes**
Seals Intact **Yes**
Received on ice **Yes**
Paperwork Included **Yes**

Work Order Comments:
pH paper LIMS ID 16B1201

Sample ID: **1608011-01**

Sampled: **Aug-16-16 10:50**

Matrix: **Water**

Sample Name: **S01**

Sample Location: **Runoff from swale before catch basin**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Sep-13-16 10:50	pH = 1
BOD	2	Aug-18-16 10:50	pH = 8
Nitrate-Nitrite N DA, Enzymatic reduction	28	Sep-13-16 10:50	pH = 1
Solids, TDS	7	Aug-23-16 10:50	pH = 8
Solids, TSS	7	Aug-23-16 10:50	pH = 8
TKN DA	28	Sep-13-16 10:50	pH = 1
Total Phosphorus DA	28	Sep-13-16 10:50	pH = 1

WORK ORDER

Printed: 9/15/2016 11:17:29AM

1608011

US EPA Region 5 Chicago Regional Laboratory

Client: Office of Enforcement and Compliance Assurance

Project Manager: Angela Ockrassa Davis

Project: **FOIA Ex. 6** Farm
(Personal)

Project Number: CV-01-16

Sample ID: 1608011-02Sampled: Aug-16-16 15:45Matrix: WaterSample Name: B02Sample Location: Blanks

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Sep-13-16 15:45	pH = 1
BOD	2	Aug-18-16 15:45	pH = 5
Nitrate-Nitrite N DA, Enzymatic reduction	28	Sep-13-16 15:45	pH = 1
Solids, TDS	7	Aug-23-16 15:45	pH = 5
Solids, TSS	7	Aug-23-16 15:45	pH = 5
TKN DA	28	Sep-13-16 15:45	pH = 1
Total Phosphorus DA	28	Sep-13-16 15:45	pH = 1

WORK ORDER MEMO: Work order login review complete -- AW 08.17.16

Work order login review for revision complete. -- RT 09012016



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 5 CHICAGO REGIONAL LABORATORY

536 SOUTH CLARK STREET

CHICAGO, ILLINOIS 60605

Date: 9/15/2016

Subject: Review of Region 5 Data for **FOIA Ex. 6 Farm**
(Personal)

To: Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago, IL 60604

From: Anna Knoebel, Chemist
US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X *Anna Knoebel*

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: **FOIA Ex. 6 Farm**
(Personal)

Data Coordinator and Date Transmitted

Analyses included in this report:

Nitrate-Nitrite N DA, Enzymatic reduction



Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-15-16 13:44

ANALYSIS CASE NARRATIVE – Nitrate-Nitrite Nitrogen in Water

Work Order: 1608011
Analyst: Anna Knoebel
Phone #: (312) 353-9467

General Information

Two water samples for Nitrate-Nitrite Nitrogen were received on August 17, 2016. All holding times were met.

Sample Analysis and Results

The samples were analyzed for Nitrate-Nitrite Nitrogen in water on September 13, 2016 using CRL SOP AIG031B, Version # 2 (SOP based on ASTM D7781-14). The samples were stored in the refrigerator at all times except when in use. Sample 1608011-01 (S01) was centrifuged prior to analysis to remove any particulates.

A new SOP (AIG031B) which follows ASTM method D7781-14 (*Standard Test Method for Nitrate-Nitrite in Water by Nitrate Reductase*) was added in August of 2015. This method is different than the method referenced in the "2015 General Field Sampling Plan 040715." The data reported herein meets the requirements referenced in CRL SOP AIG031B, Version # 2 and any laboratory specifications referenced in in "2015 General Field Sampling Plan 040715" and "2014 reporting request for CAFO samples 062014."

Quality Control

All quality control audits were within CRL limits or did not result in qualification of the data.



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Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-15-16 13:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1608011-01	Water	Aug-16-16 10:50	Aug-17-16 10:00
B02	1608011-02	Water	Aug-16-16 15:45	Aug-17-16 10:00

Nitrate-Nitrite Nitrogen, Nitrate Reductase, ASTM D7781 - 14 (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1608011-01) Matrix: Water Sampled: Aug-16-16 10:50 Received: Aug-17-16 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	0.34		0.04	0.10	mg/L	1	B161025	Sep-13-16	Sep-13-16

B02 (1608011-02) Matrix: Water Sampled: Aug-16-16 15:45 Received: Aug-17-16 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Nitrate-Nitrite N	U	U	0.04	0.10	mg/L	1	B161025	Sep-13-16	Sep-13-16



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77 W. Jackson
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Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-15-16 13:44

Notes and Definitions

- J The identification of the analyte is acceptable; the reported value is an estimate.
- U Not Detected
- NR Not Reported
- Q QC limit Exceeded



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Chicago Regional Laboratory

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WORK ORDER

Printed: 9/15/2016 11:17:29AM

1608011

US EPA Region 5 Chicago Regional Laboratory

Client: Office of Enforcement and Compliance Assurance
Project: **FOIA Ex 6** Farm

Project Manager: Angela Ockrassa Davis
Project Number: CV-01-16

Report To:

Paul Novak
Office of Enforcement and Compliance Assurance

77 W. Jackson
Chicago, IL 60604

Phone: (440) 250-1714
Fax: (312) 886-2591

Date Due: Oct-02-16 15:00 (45 day TAT)

Received By: Robert Snyder

Date Received: Aug-17-16 10:00

Logged In By: Robert Snyder

Date Logged In: Aug-17-16 10:43

Samples Received at: 2.9 °C

Work Order Comments:

Sample tags/labels Yes

pH paper LIMS ID 16B1201

Seals Intact Yes

Received on ice Yes

Paperwork Included Yes

Sample ID: 1608011-01

Sampled: Aug-16-16 10:50

Matrix: Water

Sample Name: S01

Sample Location: Runoff from swale before catch basin

Analysis	Hold time (days)	Expires	Comments
Amonia N DA, Distilled	28	Sep-13-16 10:50	pH = 1
BOD	2	Aug-18-16 10:50	pH = 8
Nitrate-Nitrite N DA, Enzymatic reduction	28	Sep-13-16 10:50	pH = 1
Solids, TDS	7	Aug-23-16 10:50	pH = 8
Solids, TSS	7	Aug-23-16 10:50	pH = 8
TKN DA	28	Sep-13-16 10:50	pH = 1
Total Phosphorus DA	28	Sep-13-16 10:50	pH = 1

WORK ORDER

Printed: 9/15/2016 11:17:29AM

1608011

US EPA Region 5 Chicago Regional Laboratory

Client: Office of Enforcement and Compliance Assurance
Project: **FOIA Ex. 6** Farm
(Personal)

Project Manager: Angela Ockrassa Davis
Project Number: CV-01-16

Sample ID: 1608011-02Sampled: Aug-16-16 15:45Matrix: WaterSample Name: B02Sample Location: Blanks

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Sep-13-16 15:45	pH = 1
BOD	2	Aug-18-16 15:45	pH = 5
Nitrate-Nitrite N DA, Enzymatic reduction	28	Sep-13-16 15:45	pH = 1
Solids, TDS	7	Aug-23-16 15:45	pH = 5
Solids, TSS	7	Aug-23-16 15:45	pH = 5
TKN DA	28	Sep-13-16 15:45	pH = 1
Total Phosphorus DA	28	Sep-13-16 15:45	pH = 1

WORK ORDER MEMO: Work order login review complete -- AW 08.17.16

Work order login review for revision complete: -- RT 09012016



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CHICAGO REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605



Date: 9/15/2016
Subject: Review of Region 5 Data for **FOIA Ex. 6 (Personal)** Farm
To: Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago, IL 60604
From: Anna Knoebel, Chemist
US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X *Anna Knoebel*

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: **FOIA Ex. 6 (Personal)** Farm

Data Coordinator and Date Transmitted

Analyses included in this report:

Ammonia N DA, Distilled



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-15-16 11:13

ANALYSIS CASE NARRATIVE – Distilled Ammonia Nitrogen in Water

Work Order: 1608011
Analyst: Anna Knoebel
Phone #: (312) 353-9467

General Information

Two water samples for Ammonia Nitrogen were received on August 17, 2016. All holding times were met.

Sample Analysis and Results

The samples were distilled on September 9, 2016 and analyzed on September 12, 2016 for Ammonia Nitrogen in water using CRL SOP AIG029B, Version # 3 (based on method 4500 – NH₃- B & H). The samples were stored in the refrigerator at all times, except when in use.

The data reported herein meets any laboratory specifications referenced in “2015 General Field Sampling Plan 040715” and “2014 reporting request for CAFO samples 062014.” The data reported herein also meets the requirements referenced in CRL SOP AIG029B, Version # 3 (based on method 4500 – NH₃- B & H).

Quality Control

All quality control audits were within CRL limits or did not result in qualification of the data.



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
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Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-15-16 11:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1608011-01	Water	Aug-16-16 10:50	Aug-17-16 10:00
B02	1608011-02	Water	Aug-16-16 15:45	Aug-17-16 10:00

Ammonia Nitrogen, SM4500B & H (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1608011-01) Matrix: Water Sampled: Aug-16-16 10:50 Received: Aug-17-16 10:00

Analyte	Result	Flags/ Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	18.1		1.60	4.00	mg/L	20	B16I017	Sep-09-16	Sep-12-16

B02 (1608011-02) Matrix: Water Sampled: Aug-16-16 15:45 Received: Aug-17-16 10:00

Analyte	Result	Flags/ Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Ammonia as N	U		0.08	0.20	mg/L	1	B16I017	Sep-09-16	Sep-12-16



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Chicago Regional Laboratory

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77 W. Jackson
Chicago IL, 60604

Project: **FOIA Ex** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-15-16 11:13

Notes and Definitions

U Not Detected
NR Not Reported
Q QC limit Exceeded



Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Phone: (312) 353-8370 Fax: (312) 886-2591

WORK ORDER

Printed: 9/9/2016 2:20:43PM

1608011

US EPA Region 5 Chicago Regional Laboratory

Client: Office of Enforcement and Compliance Assurance
Project: **FOIA Ex. 6** Farm

Project Manager: Angela Ockrassa Davis
Project Number: CV-01-16

Report To:

Paul Novak
Office of Enforcement and Compliance Assurance

77 W. Jackson
Chicago, IL 60604

Phone: (440) 250-1714
Fax: (312) 886-2591

Date Due: Oct-02-16 15:00 (45 day TAT)

Received By: Robert Snyder

Date Received: Aug-17-16 10:00

Logged In By: Robert Snyder

Date Logged In: Aug-17-16 10:43

Samples Received at: 2.9 °C
Sample tags/labels: Yes
Seals Intact: Yes
Received on ice: Yes
Paperwork Included: Yes

Work Order Comments:
pH paper LIMS ID 16B1201

Sample ID: **1608011-01** Sampled: **Aug-16-16 10:50**

Matrix: **Water**

Sample Name: **S01**

Sample Location: **Runoff from swale before catch basin**

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Sep-13-16 10:50	pH = 1
BOD	2	Aug-18-16 10:50	pH = 8
Nitrate-Nitrite N DA, Enzymatic reduction	28	Sep-13-16 10:50	pH = 1
Solids, TDS	7	Aug-23-16 10:50	pH = 8
Solids, TSS	7	Aug-23-16 10:50	pH = 8
TKN DA	28	Sep-13-16 10:50	pH = 1
Total Phosphorus DA	28	Sep-13-16 10:50	pH = 1

WORK ORDER

Printed: 9/9/2016 2:20:43PM

1608011

US EPA Region 5 Chicago Regional Laboratory

Client: Office of Enforcement and Compliance Assurance

Project Manager: Angela Ockrassa Davis

Project: **FOIA Ex. 6** Farm
(Personal)

Project Number: CV-01-16

Sample ID: 1608011-02

Sampled: Aug-16-16 15:45

Matrix: Water

Sample Name: B02

Sample Location: Blanks

Analysis	Hold time (days)	Expires	Comments
Ammonia N DA, Distilled	28	Sep-13-16 15:45	pH = 1
BOD	2	Aug-18-16 15:45	pH = 5
Nitrate-Nitrite N DA, Enzymatic reduction	28	Sep-13-16 15:45	pH = 1
Solids, TDS	7	Aug-23-16 15:45	pH = 5
Solids, TSS	7	Aug-23-16 15:45	pH = 5
TKN DA	28	Sep-13-16 15:45	pH = 1
Total Phosphorus DA	28	Sep-13-16 15:45	pH = 1

WORK ORDER MEMO: Work order login review complete -- AW 08.17.16

Work order login review for revision complete. -- RT 09012016



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5 CHICAGO REGIONAL LABORATORY
536 SOUTH CLARK STREET
CHICAGO, ILLINOIS 60605



LABORATORY
ACCREDITATION
BUREAU
ACCREDITED ISO/IEC 17025
Certificate # L2280 Testing

Date: 9/9/2016
Subject: Review of Region 5 Data for **FOIA Ex. 6 Farm**
(Personal)
To: Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago, IL 60604
From: Nidia Fuentes, Chemist
US EPA Region 5 Chicago Regional Laboratory

The data transmitted under this cover memo successfully passed CRL's data review procedures as documented in the current Quality Management Plan and applicable Standard Operating Procedures. In accordance with the EPA QA/G-8 *Guidance on Environmental Data Verification and Data Validation* and the U.S. EPA Region 5 RMD QMP, CRL performs data verification on all the data generated internally. CRL does not perform data validation or quality assessment procedures.

This report was reviewed and the information provided herein accurately represents the analysis performed.

X Nidia Fuentes 09/09/2016

Please contact the analyst with any technical report issues, Robert Thompson at (312)-353-9078 for sample project concerns, and Sylvia Griffin at (312)-353-9073 with data transmittal questions. Thank you.

Attached are Results for: **FOIA Ex. 6 Farm**
(Personal)

Data Coordinator and Date Transmitted

Analyses included in this report:

TKN DA

Total Phosphorus DA



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone: (312) 353-8370 Fax: (312) 886-2591

Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-09-16 14:19

Analysis Case Narrative

General Information

A total of two water samples to be analyzed for Total Phosphorus (TP) were received at the Chicago Regional Laboratory on August 17, 2016. The samples were analyzed within the holding time. The designated analyst for the samples is Nidia Fuentes. Nidia can be reached at 312-353-9079.

Supportive data such as instrument raw data, reagents preparation sheet and miscellaneous items are filed with work order 1608008.

Sample Analysis and Results

The data reported herein meets the Data Quality Objectives referenced in the 2015 General Field Sampling Plan 040715 and 2014 reporting request for CAFO samples 062014. The data reported herein meets the limits reference in CRL SOP AIG034B Version #3 (EPA method 365.4).

Quality Control

All quality control audits were within the CRL's limits, with exception of matrix spike.

Sample 1608011-01 (S01) spike recovery of 135 % exceeded the QC limits of 75 - 123%. Due to possible matrix effect. This situation does not affect the quality of the data. Other QC values such as BS (blank spike, 97%) and MRL (method detection limit, 87%) were within the QC limits. Sample is qualified as "K". The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.



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Chicago Regional Laboratory

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77 W. Jackson
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Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-09-16 14:19

Analysis Case Narrative

General Information

A total of two water samples, to be analyzed for Total Kjeldahl Nitrogen (TKN), were received at the Chicago Regional Laboratory on August 17, 2016. The samples were digested and analyzed using CRL SOP AIG035B, Version #4 (based on EPA method 351.2). All holding times were met. The designated analyst for these samples is Nidia Fuentes. Nidia can be reached at 312-353-9079.

Sample Analysis and Results

The data reported herein meets the Data Quality Objectives referenced in the 2015 General Field Sampling Plan 040715 and 2014 reporting request for CAFO samples 062014. The data reported herein meets the limits reference in CRL SOP AIG035B Version #4 (EPA method 351.2).

Quality Control

All quality control audits were within the CRL limits, with the exception of matrix spike.

The matrix spike sample 1608011-01(S01) recovery of 48% failed QC limit of 90 to 110%. Due to possible matrix effect. This situation does not affect the quality of the data. Other QC values such as BS (blank spike, 107%) and MRL (method detection limit, 127%) were within the QC limits. Sample is flagged as 'L' meaning - the identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.



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77 W. Jackson
Chicago IL, 60604

Project: **FOIA EX-6** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-09-16 14:19

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S01	1608011-01	Water	Aug-16-16 10:50	Aug-17-16 10:00
B02	1608011-02	Water	Aug-16-16 15:45	Aug-17-16 10:00



Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-09-16 14:19

Phosphorus, Colorimetric, EPA 365.4 (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1608011-01) Matrix: Water Sampled: Aug-16-16 10:50 Received: Aug-17-16 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	16.4	K	1.20	3.00	mg/L	20	B16H043	Aug-23-16	Aug-24-16

B02 (1608011-02) Matrix: Water Sampled: Aug-16-16 15:45 Received: Aug-17-16 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Phosphorus	U		0.06	0.15	mg/L	1	B16H043	Aug-23-16	Aug-24-16



Environmental Protection Agency Region 5
Chicago Regional Laboratory

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Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA Ex. 6** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-09-16 14:19

Total Kjeldahl Nitrogen, EPA 351.2 (modified)
US EPA Region 5 Chicago Regional Laboratory

S01 (1608011-01) Matrix: Water Sampled: Aug-16-16 10:50 Received: Aug-17-16 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	68.5	L	4.00	10.0	mg/L	20	B16H044	Aug-23-16	Aug-24-16

B02 (1608011-02) Matrix: Water Sampled: Aug-16-16 15:45 Received: Aug-17-16 10:00

Analyte	Result	Flags / Qualifiers	MDL	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed
Total Kjeldahl Nitrogen	0.32	J	0.20	0.50	mg/L	1	B16H044	Aug-23-16	Aug-24-16



Environmental Protection Agency Region 5
Chicago Regional Laboratory

536 South Clark Street, Chicago, IL 60605
Phone:(312)353-8370 Fax:(312)886-2591

Office of Enforcement and Compliance Assurance
77 W. Jackson
Chicago IL, 60604

Project: **FOIA EX** Farm
Project Number: CV-01-16
Project Manager: Paul Novak

Reported:
Sep-09-16 14:19

Notes and Definitions

- L The identification of the analyte is acceptable; the reported value may be biased low. The actual value is expected to be greater than the reported value.
- K The identification of the analyte is acceptable; the reported value may be biased high. The actual value is expected to be less than the reported value.
- J The identification of the analyte is acceptable; the reported value is an estimate.
- U Not Detected
- NR Not Reported
- Q QC limit Exceeded



ANALYTICAL REPORT

US EPA
 Attn: Cheryl Burdett WC-15J
 77 West Jackson Boulevard
 Chicago, IL 60604

Lab Project # L16-17049
 Received: 08/16/2016
 Reported: 08/18/2016
 Date/Time Sampled: 08/16/2016 10:50
 Sampled By: AMV/PJN
 Sampled Matrix: Wastewater
 Containers: 1

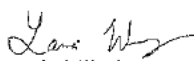
Project Name: FOIA Ex. 6 (Personal) Farm

Sample ID: S01-Runoff from swale before catch basin

Lab Sample # L16-17049-01

Analyte	Results	Units	PQL	Method	Analyst	Extraction Date	Analysis Date
Fecal Coliform	>200000	per 100mL	1000	SM-9222D	ANS		08/17/2016

Analysis Certified By: _____


 Lanie Wenning

Activity Code:

Printed on Recycled Paper/Printed with Soy-Based Ink

5. *Environ Biol Fish* (2008) 81:1–10

Chicago, Illinois 60604

[illegible]

Chicago, Illinois 60604

